

9/5/1 (Item 1 from file: 350)  
 DIALOG(R)File 350:Derwent WPIX  
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012165455 \*\*Image available\*\*

WPI Acc No: 1998-582367/199849

Related WPI Acc No: 1992-433310; 1992-433311; 1992-433312; 1992-433313;  
 1992-433314; 1992-433317; 1993-182174; 1993-405361; 1993-405449;  
 1995-147204; 1995-230559; 1995-403906; 1996-179171; 1996-200114;  
 1996-238574; 1996-299705; 1996-433483; 1996-463979; 1996-496720;  
 1997-011121; 1997-235624; 1997-372643; 1997-511725; 1998-017472;  
 1999-141703; 1999-493393; 1999-517858

XRPX Acc No: N98-453725

**Surgical retraction method for endoscopic cardiac surgery - involves forming incisions in tissue adjacent rib cage, passing retractor device through which engages ribs and then applying a lifting force to retractor to create working space**

Patent Assignee: ORIGIN MEDSYSTEMS INC (ORIG-N)

Inventor: CHIN A K

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5823946	A	19981020	US 94279290	A	19940722	199849 B
			US 96668827	A	19960624	
			US 97869830	A	19970605	

Priority Applications (No Type Date): US 94279290 A 19940722; US 96668827 A 19960624; US 97869830 A 19970605

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5823946	A		14	A61B-017/02	Cont of application US 94279290
					Cont of application US 96668827
					Cont of patent US 5676636

Abstract (Basic): US 5823946 A

The method involves forming a first, **subxiphoid** incision and then a second incision in a diaphragm positioned adjacent to the rib cage (AA) and then a suprasternal incision and then passing the distal end of a specialised retractor device (10) through the incisions engaging it with the rib cage. A lifting force is applied to the proximal portion of the retractor device so as to lift the rib cage and the sternum to create a mediastinal working space within the rib cage.

Surgical instruments (202,204) are introduced between a pair of the ribs which adjoin the sternum to one side of the sternum so that they pass into the mediastinal working space. The surgical procedure is performed using the surgical instruments within the mediastinal working space while maintaining the lifting force on the retractor for the duration of the surgery.

ADVANTAGE - Provides an optimum working space without having to perform a sternotomy, hence reducing trauma to the patient etc.

Dwg.9/14

Title Terms: SURGICAL; RETRACT; METHOD; ENDOSCOPE; **CARDIAC**; SURGICAL; FORMING; INCISION; TISSUE; ADJACENT; RIB; CAGE; PASS; RETRACT; DEVICE; THROUGH; ENGAGE; RIB; APPLY; LIFT; FORCE; RETRACT; WORK; SPACE

Derwent Class: P31

International Patent Class (Main): A61B-017/02

File Segment: EngPI

9/5/2 (Item 2 from file: 350)  
 DIALOG(R)File 350:Derwent WPIX  
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008571470 \*\*Image available\*\*

WPI Acc No: 1991-075503/199111

XRPX Acc No: N91-058345

**Method for inserting intra-pericardial electrodes - provides**

**intra-pericardial access by clamping wall and passing guide wire through  
clamping jaw guides and tissue**

Patent Assignee: VENTRITEX INC (VENT-N)

Inventor: CHIN A K ; FAIN E S; FOGARTY T J

Number of Countries: 005 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 417031	A	19910313	EP 90630153	A	19900906	199111 B
CA 2024901	A	19910309				199120
US 5033477	A	19910723	US 89404957	A	19890908	199132
US 5071428	A	19911210	US 91656295	A	19910215	199201
EP 417031	A3	19930317	EP 90630153	A	19900906	199350

Priority Applications (No Type Date): US 89404957 A 19890908; US 87120590 A  
19871113; US 91656295 A 19910215

Cited Patents: NoSR.Pub; FR 1539593; GB 2214814; US 4312337

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
EP 417031	A			

Designated States (Regional): DE FR GB

Abstract (Basic): EP 417031 A

The method involves creating a **subxiphoid** incision; and dissecting a tunnel between the pericardium and the diaphragm from the **subxiphoid** incision towards the posterior aspect of the pericardium. A pericardial incision is made in the inferior border of the pericardium. A clamp-like placement device is provided having elongate tubular jaws with aligned open distal ends curved towards one another. One of the jaws is passed through the pericardial incision to locate the curved end of the jaw at a posterior position within the pericardium. The other of the jaws is passed into the tunnel to the exterior of the pericardium to locate the curved end of the other jaw in alignment with the curved end of the one jaw. A guide wire is passed through the jaws to extend the wire within and through the pericardium.

The placement device is removed while leaving the guide wire in place. A cannula is extended over the wire within the tunnel to pass the cannula through the tunnel and into the pericardium.

An electrode is passed through the cannula and into the pericardium to one side of the **heart**. (11pp DWg.No.1/21)

Title Terms: METHOD; INSERT; INTRA; ELECTRODE; INTRA; ACCESS; CLAMP; WALL; PASS; GUIDE; WIRE; THROUGH; CLAMP; JAW; GUIDE; TISSUE

Derwent Class: P31; P34; S05

International Patent Class (Additional): A61B-017/28; A61M-025/02;  
A61N-001/05

File Segment: EPI; EngPI

Set	Items	Description
S1	131	E3,E12
S2	78	E35,E33
S3	209	S2 OR S1
S4	29	S3 AND (HEART OR CARDIO? OR CARDIA?)
S5	0	S4 AND X?PHOID
S6	0	S4 AND XYPHOID
S7	2	S4 AND (SUBXIPHOID OR SUBXYPHOID)
S8	2	IDPAT (sorted in duplicate/non-duplicate order)
S9	2	IDPAT (primary/non-duplicate records only)

?show files

File 347:JAPIO Oct 1976-2002/Jul(Updated 021104)

(c) 2002 JPO & JAPIO

File 348:EUROPEAN PATENTS 1978-2002/Nov W03

(c) 2002 European Patent Office

File 349:PCT FULLTEXT 1979-2002/UB=20021121,UT=20021114

(c) 2002 WIPO/Univentio

File 350:Derwent WPIX 1963-2002/UD,UM &UP=200276

(c) 2002 Thomson Derwent

File 371:French Patents 1961-2002/BOPI 200209

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8/5/1 (Item 1 from file: 350)  
 DIALOG(R)File 350:Derwent WPIX  
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012686572 \*\*Image available\*\*  
 WPI Acc No: 1999-492680/199941  
 Related WPI Acc No: 1994-065420; 1997-548822; 2001-589142  
 XRPX Acc No: N99-366878

**Inflatable balloon inserting device in chest wall for providing blood flow in coronary arteries, cerebral arteries**

Patent Assignee: ZADINI F P (ZADI-I); ZADINI G C (ZADI-I)

Inventor: ZADINI F P; ZADINI G C

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5931850	A	19990803	US 92924301	A	19920803	199941 B
			US 93100573	A	19930730	
			US 95555985	A	19951113	

Priority Applications (No Type Date): US 95555985 A 19951113; US 92924301 A 19920803; US 93100573 A 19930730

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5931850	A		58	A61M-029/00	CIP of application US 92924301
					CIP of application US 93100573
					CIP of patent US 5466221

Abstract (Basic): US 5931850 A

NOVELTY - The inflatable balloon (105) is mounted at the stem of a stem structure (100) the balloon is biased towards the stem by a spring and constrained backwardly by the tissue layers during its advancement through the chest wall. The balloon is advanced relatively to the stem to enable entry into the chest cavity.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (a) direct heart message apparatus;
- (b) cardiac resuscitation device.

USE - For insertion of inflatable balloon in chest wall for cardiac resuscitation for maintaining blood flow in coronary arteries, cerebral arteries by cardiac pump.

ADVANTAGE - Enables direct heart message without risk in passive opening of thoracic cavity. Facilitates safe and quick insertion of balloon in chest cavity for direct heart message. Generates artificial circulation by executing pumping action in heart by pressing and releasing heart from thoracic spine. Facilitates installation of balloon even by paramedical person by simplifying installation process. Enables installation of balloon in heart in hospital, outer area during cardiac arrest. Facilitates automated installation of balloon on anterior chest wall or on **subxyphoidal** region. Prevents injection by using disposable sterile unit. Prevents accidental damage of heart by using stem with blunt end.

DESCRIPTION OF DRAWING(S) - The figure shows a sectional view of cardiac pump.

Stem structure (100)

Inflatable balloon (105)

pp; 58 DwgNo 1/37

Title Terms: INFLATE; BALLOON; INSERT; DEVICE; CHEST; WALL; BLOOD; FLOW; CORONARY; ARTERY; CEREBRAL; ARTERY

Derwent Class: P34

International Patent Class (Main): A61M-029/00

File Segment: EngPI

8/5/2 (Item 2 from file: 350)  
 DIALOG(R)File 350:Derwent WPIX  
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012505459 \*\*Image available\*\*

WPI Acc No: 1999-311564/199926

XRAM Acc No: C99-091936

XRPX Acc No: N99-232573

**Epicardial implantable defibrillator lead**

Patent Assignee: UNIV MINNESOTA (MINU )

Inventor: MOLINA J E

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5897586	A	19990427	US 97911236	A	19970815	199926 B

Priority Applications (No Type Date): US 97911236 A 19970815

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5897586	A		12	A61N-001/05	

Abstract (Basic): US 5897586 A

NOVELTY - The lead (1) includes a system of one or more coils (7) and one or more sensors (9) coupled, but not electrically connected, in a linear arrangement and which can be configured as a loop (15). A closure segment (13) includes a sleeve (25) and perforations (29) for closing the loop with a suture. The lead also includes a connector system (5) comprised of an insulating sheath (23) enclosing a conductor and ends (45,47) for coupling the loop system (3) to a pulse generator.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(a) a method of implanting the lead which comprises introducing the lead into the pericardium through a transxiphoid or **subxiphoid** incision, securing the lead to the diaphragmatic surface of the pericardium, advancing the lead into the pericardium and closing the incision;

(b) a further step of fastening the lead in a looped configuration and securing to the pericardium with a single suture;

(c) a further step of implanting a pulse generator in the patient and connecting the pulse generator to the lead.

USE - For treating disorders of the heart requiring defibrillation, by implanting the defibrillator, sensing an arrhythmia and activating the defibrillator lead by a pulse generator.

ADVANTAGE - The lead can be configured for use in an adult or a child by adjusting the number of coils, the number of sensors, the loop diameter and the connector system length. It can be implanted by a small incision that does not require opening either the chest or the heart. It can be removed if no longer needed or if complications arise by a simple surgical procedure carried out under local anesthesia. The lead has numerous advantages over cardiac defibrillators based on patch leads and transvenous leads.

DESCRIPTION OF DRAWING(S) - The drawing shows an adult defibrillator lead configured as a loop with its connector system.

Defibrillator lead (1)

Loop system (3)

Connector system (5)

Coils (7)

Sensors (9)

Loop system end (11)

Closure segment (13)

Loop (15)

Adult lead (17)

Conductive portion of coil (21)

Insulating sheath (22,23)

Sleeve (25)

Perforations (29)

Perforation member (43)

Connector system ends. (45,47)

pp; 12 DwgNo 3/9

Title Terms: EPICARDIUM; IMPLANT; DEFIBRILLATE; LEAD

Derwent Class: A96; D22; P34; S05

International Patent Class (Main): A61N-001/05

File Segment: CPI; EPI; EngPI

8/5/3 (Item 3 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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012165455 \*\*Image available\*\*

WPI Acc No: 1998-582367/199849

Related WPI Acc No: 1992-433310; 1992-433311; 1992-433312; 1992-433313;

1992-433314; 1992-433317; 1993-182174; 1993-405361; 1993-405449;

1995-147204; 1995-230559; 1995-403906; 1996-179171; 1996-200114;

1996-238574; 1996-299705; 1996-433483; 1996-463979; 1996-496720;

1997-011121; 1997-235624; 1997-372643; 1997-511725; 1998-017472;

1999-141703; 1999-493393; 1999-517858

XRPX Acc No: N98-453725

**Surgical retraction method for endoscopic cardiac surgery - involves forming incisions in tissue adjacent rib cage, passing retractor device through which engages ribs and then applying a lifting force to retractor to create working space**

Patent Assignee: ORIGIN MEDSYSTEMS INC (ORIG-N)

Inventor: CHIN A K

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5823946	A	19981020	US 94279290	A	19940722	199849 B
			US 96668827	A	19960624	
			US 97869830	A	19970605	

Priority Applications (No Type Date): US 94279290 A 19940722; US 96668827 A 19960624; US 97869830 A 19970605

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5823946	A	14	A61B-017/02		Cont of application US 94279290 Cont of application US 96668827 Cont of patent US 5676636

Abstract (Basic): US 5823946 A

The method involves forming a first, **subxiphoid** incision and then a second incision in a diaphragm positioned adjacent to the rib cage (AA) and then a suprasternal incision and then passing the distal end of a specialised retractor device (10) through the incisions engaging it with the rib cage. A lifting force is applied to the proximal portion of the retractor device so as to lift the rib cage and the sternum to create a mediastinal working space within the rib cage.

Surgical instruments (202,204) are introduced between a pair of the ribs which adjoin the sternum to one side of the sternum so that they pass into the mediastinal working space. The surgical procedure is performed using the surgical instruments within the mediastinal working space while maintaining the lifting force on the retractor for the duration of the surgery.

ADVANTAGE - Provides an optimum working space without having to perform a sternotomy, hence reducing trauma to the patient etc.

Dwg.9/14

Title Terms: SURGICAL; RETRACT; METHOD; ENDOSCOPE; CARDIAC; SURGICAL; FORMING; INCISION; TISSUE; ADJACENT; RIB; CAGE; PASS; RETRACT; DEVICE; THROUGH; ENGAGE; RIB; APPLY; LIFT; FORCE; RETRACT; WORK; SPACE

Derwent Class: P31

International Patent Class (Main): A61B-017/02

File Segment: EngPI

8/5/4 (Item 4 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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011812757 \*\*Image available\*\*

WPI Acc No: 1998-229667/199820

XRPX Acc No: N98-181924

Cryogenic probe for epicardial mapping and ablating tissue - with two adjustable insulating isolation sheath sections carried on tubular loop to expose ablating and isolate non-ablating portions of tubular loop

Patent Assignee: AVITALL B (AVIT-I)

Inventor: AVITALL B

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5733280	A	19980331	US 95559426	A	19951115	199820 B

Priority Applications (No Type Date): US 95559426 A 19951115

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5733280	A		15	A61B-017/36	

Abstract (Basic): US 5733280 A

The probe handle (50) is connected to a length of evaporator stainless steel tubing (52) with one or more length of shaped insulators (54,56) covering parts of the tubing. The tubing forms an open loop. It forms an inlet (58) and outlet section (60) to pass cryogenic fluid through an adjustable flow control system (62).

The insulators are movable along the tubing to adjust the ablation pattern. The insulating sheath sections are used to isolate any part of the tubing. The exposed part of the tubing is used for the ablation. Cryogenic gas flow conducts heat from the tissues and allows the system to reach cryogenic temperature needed for tissue ablation.

USE - For direct open chest epicardial work and transcutaneous **subxiphoid** intrapericardial epicardial access, treatment of ventricular tachycardia.

ADVANTAGE - Enables ice mapping which does not harm tissue.

Dwg.2a/4

Title Terms: CRYOGENIC; PROBE; EPICARDIUM; MAP; ABLATE; TISSUE; TWO; ADJUST ; INSULATE; ISOLATE; SHEATH; SECTION; CARRY; TUBE; LOOP; EXPOSE; ABLATE; ISOLATE; NON; ABLATE; PORTION; TUBE; LOOP

Derwent Class: P31; S05

International Patent Class (Main): A61B-017/36

File Segment: EPI; EngPI

8/5/5 (Item 5 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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011728415 \*\*Image available\*\*

WPI Acc No: 1998-145325/199813

XPX Acc No: N98-114987

**Minimally invasive device for performing direct cardiac massage - has inflatable bladder mounted on rigid inflation tube, rigid inflation tube being used to push bladder into space between sternum and heart through incision in upper abdomen**

Patent Assignee: FOGARTY T J (FOGA-I)

Inventor: FOGARTY T J; RYAN T J

Number of Countries: 021 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9805289	A1	19980212	WO 971B1096	A	19970801	199813 B
AU 9740285	A	19980225	AU 9740285	A	19970801	199829
US 6059750	A	20000509	US 96691042	A	19960801	200030

Priority Applications (No Type Date): US 96691042 A 19960801

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9805289	A1	E	38	A61H-031/00	

Designated States (National): AU CA JP

Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE

AU 9740285	A		A61H-031/00	Based on patent WO 9805289
US 6059750	A		A61M-029/00	

Abstract (Basic): WO 9805289 A

The minimally invasive device for performing direct cardiac massage includes an inflatable bladder (2) mounted on a rigid inflation tube (3). The rigid inflation tube is used to push the bladder into the sternocostal space through an incision in the upper abdomen just below the xiphoid process.

After inserting into the sternocostal space, the bladder is repeatedly inflated and deflated to massage the heart and provide the blood flow.

ADVANTAGE - Enables direct cardiac massage to be easily accomplished by emergency medical personnel, paramedics, doctors etc. without thoracotomy. Provides adequate heart compression for extended periods of time without loss of effectiveness due to e.g. fatigue of medics.

Dwg.1/17

Title Terms: MINIMUM; INVADE; DEVICE; PERFORMANCE; DIRECT; CARDIAC; MASSAGE; INFLATE; BLADDER; MOUNT; RIGID; INFLATE; TUBE; RIGID; INFLATE; TUBE; PUSH; BLADDER; SPACE; STERNUM; HEART; THROUGH; INCISION; UPPER; ABDOMEN

Derwent Class: P33; P34

International Patent Class (Main): A61H-031/00; A61M-029/00

File Segment: EngPI

8/5/6 (Item 6 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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011633121

WPI Acc No: 1998-050249/199805

XRPX Acc No: N98-040037

**Treatment of chronic broncho-pulmonary diseases with breathing exercises - expelling air from lungs through hollow tube in which harmonic acoustic vibrations are generated, e.g. musical instrument.**

Patent Assignee: LAZAREV M L (LAZA-I)

Inventor: LAZAREV M L

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
RU 2082372	C1	19970627	RU 9431226	A	19940810	199805 B

Priority Applications (No Type Date): RU 9431226 A 19940810

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
RU 2082372	C1		9 A61H-001/00	

Abstract (Basic): RU 2082372 C

A procedure, based on repeated breathing exercises, includes expulsion of air from the lungs while subjecting the respiratory tract to acoustic vibrations and passing the expelled air through a hollow tube with a resistance to the air flow and at the same time restricting the thoracic cage movement with a bandage.

The resistance of the hollow tube is 0.1 - 1.5 kPa, and at the same time as the air is expelled harmonic acoustic vibrations are set up in the tube at a frequency of 80 - 10000 Hz, while the mobility of the thoracic cage is limited by an elastic bandage with a flexibility of 1.5 - 4.0 cm/n. applied to the chest below the xiphoid process. The tube used to produce the acoustic vibrations can be a musical wind instrument such as a trumpet.

ADVANTAGE - Procedure provides stimulation to different sets of muscles in a controlled manner; it improved removal of moisture from lungs and eliminates conditions which cause asthma attacks.

Dwg.0/0

Title Terms: TREAT; CHRONIC; BRONCHO; PULMONARY; DISEASE; BREATH; EXERCISE; EXPEL; AIR; LUNG; THROUGH; HOLLOW; TUBE; HARMONIC; ACOUSTIC; VIBRATION; GENERATE; MUSIC; INSTRUMENT

Derwent Class: P33

International Patent Class (Main): A61H-001/00



File Segment: EngPI

8/5/7 (Item 7 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
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010363365  
WPI Acc No: 1995-264678/199535  
XRAM Acc No: C95-120562  
XRPX Acc No: N95-203649

**Defibrillator electrode for implantation - has a flexible conductive mesh and insulator for insertion through a small opening in a simple surgical procedure**

Patent Assignee: FOGARTY T J (FOGA-I)  
Inventor: FOGARTY T J; HOWELL T A  
Number of Countries: 019 Number of Patents: 005  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 665030	A2	19950802	EP 95630004	A	19950126	199535 B
CA 2117618	A	19950729	CA 2117618	A	19940901	199542
US 5464447	A	19951107	US 94188573	A	19940128	199550
US 5618287	A	19970408	US 94188573	A	19940128	199720
			US 95406125	A	19950317	
US 5690648	A	19971125	US 94188573	A	19940128	199802
			US 95406372	A	19950317	
			US 96620986	A	19960322	

Priority Applications (No Type Date): US 94188573 A 19940128; US 95406125 A 19950317; US 95406372 A 19950317; US 96620986 A 19960322

Cited Patents: No-SR.Pub

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 665030	A2	E	14	A61N-001/05	
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE					
US 5464447	A		12	A61N-001/05	
US 5618287	A		12	A61N-001/05	Div ex application US 94188573
US 5690648	A		12	A61N-001/04	Div ex application US 94188573 Div ex application US 95406372 Div ex patent US 5464447
CA 2117618	A			A61N-001/05	

Abstract (Basic): EP 665030 A

The implantable defibrillator electrode has a flexible conductive mesh of platinum wire with a flexible conductive wire. A flexible insulator, of silicone, is fixed to one side of the conductive mesh, extending over the circumference of the mesh. The insulator has a tail of a flexible multifilament nylon cord.

Also claimed is a method for implanting the electrode, by deflating the left lung of the patient and making an opening in the chest between a second and a sixth rib, for the insertion of a trocar. A **subxiphoid** opening is made, together with an opening in the inferior border of the pericardium. The rolled defibrillator electrode is passed through the **subxiphoid** opening for positioning close to the heart, and be positioned by pressure. The electrode is secured to a surface of a pericardium.

ADVANTAGE - The defibrillator electrode can be inserted and positioned in a minor and simple surgical procedure, without patient trauma.

Dwg.0/19

Title Terms: DEFIBRILLATE; ELECTRODE; IMPLANT; FLEXIBLE; CONDUCTING; MESH; INSULATE; INSERT; THROUGH; OPEN; SIMPLE; SURGICAL; PROCEDURE

Derwent Class: A96; P34; S05

International Patent Class (Main): A61N-001/04; A61N-001/05

File Segment: CPI; EPI; EngPI

8/5/8 (Item 8 from file: 350)

DIALOG(R)File 350:Derwent WPIX  
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009579044 \*\*Image available\*\*  
WPI Acc No: 1993-272590/199334  
XRPX Acc No: N93-209381

**Obtaining access to intra-pericardial space of patient's heart - involves percutaneously perforating pericardium, inserting guide wire and introducing sheath over guide wire to create access channel**

Patent Assignee: DIMED INC (DIME-N)  
Inventor: ELLIOTT C D; ELLIOT C D  
Number of Countries: 019 Number of Patents: 002  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9315791	A1	19930819	WO 93US693	A	19930125	199334 B
AU 9335935	A	19930903	AU 9335935	A	19930125	199401

Priority Applications (No Type Date): US 92835182 A 19920212  
Cited Patents: US 4865037; US 4884567; US 4946457; US 4991578

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9315791	A1	E	43	A61N-001/05	
Designated States (National): AU CA JP					
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE					
AU 9335935	A			A61N-001/05	Based on patent WO 9315791

Abstract (Basic): WO 9315791 A

The method for obtaining access to the pericardial space (24) of a patient's heart involves using a hand held syringe (34) to inject fluid into the pericardium to distend the pericardium away from the heart. A needle (28) having a lumen through it is inserted from a **sub - xiphoid** position such that the tip punctures the distended pericardium.

A guide wire (36) is inserted into the pericardium through the lumen of the needle and while the guide wire remains in the pericardial space, the needle is removed. A sheath is introduced over the guide wire, with the aid of a dilator, and inserted into the tissue until one end is positioned within the pericardium.

USE/ADVANTAGE - Sheath provides an access channel into the pericardial space for medical operations, e.g insertion of a pacemaker or defibrillator electrodes, mapping devices, ablation devices, scopes etc.

Dwg.2b/6

Title Terms: OBTAIN; ACCESS; INTRA; SPACE; PATIENT; HEART; PERCUTANEOUS; PERFORATION; PERICARDIUM; INSERT; GUIDE; WIRE; INTRODUCING; SHEATH; GUIDE; WIRE; ACCESS; CHANNEL

Derwent Class: P34; S05  
International Patent Class (Main): A61N-001/05  
File Segment: EPI; EngPI

8/5/9 (Item 9 from file: 350)

DIALOG(R)File 350:Derwent WPIX  
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009244742  
WPI Acc No: 1992-372160/199245  
XRAM Acc No: C92-165322

**Treatment of myasthenia - involves intramuscular admin. of cyclo-phosphane and lidase to the region of xiphoid process directly below it and slightly to the side**

Patent Assignee: MINSK CIVIC CLINIC HOSP NO5 (MICI-R); NEUROLOGY MEUROSURGERY PHYSIOTHERAPY (NEUR-R)  
Inventor: ARKIND G D; LATYSHEVA V YA; PONOMAREVA E N  
Number of Countries: 001 Number of Patents: 001  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
SU 1697825	A1	19911215	SU 4661061	A	19890210	199245 B

Priority Applications (No Type Date): SU 4661061 A 19890210

Patent Details:

Patent No	Kind	Lan	Pg	Main	IPC	Filing	Notes
SU 1697825	A1		2	A61K-037/56			

Abstract (Basic): SU 1697825 A

A patient is given an injection of 'lidase'; (sic) into the lymphatic system of anterior mediastinum, and this is followed after 30-60 sec. by intramuscular injection of the immunodepressant cyclophosphane. The course of treatment comprises 10-15 daily injections.

USE/ADVANTAGE - Various forms of myasthenia in the state of decompensation are treated more efficiently. The method reduces the duration of complete treatment to 38 days, and increases the length of remission period in 70% of the cases. Bul.46/15.12.91

Dwg.0/0

Title Terms: TREAT; MYASTHENIA; INTRAMUSCULAR; ADMINISTER; CYCLO; PHOSPHANE ; REGION; PROCESS; BELOW; SLIGHT; SIDE

Derwent Class: B04; B05; D16

International Patent Class (Main): A61K-037/56

File Segment: CPI

8/5/10 (Item 10 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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008571470 \*\*Image available\*\*

WPI Acc No: 1991-075503/199111

XRPX Acc No: N91-058345

**Method for inserting intra-pericardial electrodes - provides intra-pericardial access by clamping wall and passing guide wire through clamping jaw guides and tissue**

Patent Assignee: VENTRITEX INC (VENT-N)

Inventor: CHIN A K; FAIN E S; FOGARTY T J

Number of Countries: 005 Number of Patents: 005

Patent Family:

Patent No.	Kind	Date	Applicat No	Kind	Date	Week
EP 417031	A	19910313	EP 90630153	A	19900906	199111 B
CA 2024901	A	19910309				199120
US 5033477	A	19910723	US 89404957	A	19890908	199132
US 5071428	A	19911210	US 91656295	A	19910215	199201
EP 417031	A3	19930317	EP 90630153	A	19900906	199350

Priority Applications (No Type Date): US 89404957 A 19890908; US 87120590 A 19871113; US 91656295 A 19910215

Cited Patents: NoSR.Pub; FR 1539593; GB 2214814; US 4312337

Patent Details:

Patent No	Kind	Lan	Pg	Main	IPC	Filing	Notes
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EP 417031	A						
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Designated States (Regional): DE FR GB

Abstract (Basic): EP 417031 A

The method involves creating a **subxiphoid** incision; and dissecting a tunnel between the pericardium and the diaphragm from the **subxiphoid** incision towards the posterior aspect of the pericardium. A pericardial incision is made in the inferior border of the pericardium. A clamp-like placement device is provided having elongate tubular jaws with aligned open distal ends curved towards one another. One of the jaws is passed through the pericardial incision to locate the curved end of the jaw at a posterior position within the pericardium. The other of the jaws is passed into the tunnel to the exterior of the pericardium to locate the curved end of the other jaw in alignment with the curved end of the one jaw. A guide wire is passed through the jaws to extend the wire within and through the pericardium.

The placement device is removed while leaving the guide wire in place. A cannula is extended over the wire within the tunnel to pass

the cannula through the tunnel and into the pericardium.

An electrode is passed through the cannula and into the pericardium to one side of the heart. (11pp DWg.No.1/21

Title Terms: METHOD; INSERT; INTRA; ELECTRODE; INTRA; ACCESS; CLAMP; WALL; PASS; GUIDE; WIRE; THROUGH; CLAMP; JAW; GUIDE; TISSUE

Derwent Class: P31; P34; S05

International Patent Class (Additional): A61B-017/28; A61M-025/02;

A61N-001/05

File Segment: EPI; EngPI

8/5/11 (Item 11 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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008560923 \*\*Image available\*\*

WPI Acc No: 1991-064958/199109

XRPX Acc No: N91-050257

**Implantable self-anchoring epicardial defibrillation electrode - with sheath introduced over guide wire and inserted into tissue until one end is within pericardium**

Patent Assignee: SIEMENS-PACESETTER (SIEI )

Inventor: COHEN D M

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 4991578	A	19910212	US 89333391	A	19890404	199109 B

Priority Applications (No Type Date): US 89333391 A 19890404

Abstract (Basic): US 4991578 A

The pericardium is distended from the heart by injecting a small volume of fluid into the pericardium. A needle having a through lumen is inserted from a **sub - xiphoid** or other percutaneous position into the body tissue until a tip punctures the distended pericardium at a selected location. A guide wire is inserted into the pericardium through the lumen of the needle. While the guide wire remains in the pericardial space, the needle is removed.

A sheath is introduced over the guide wire with the aid of a dilator and inserted into the tissue until one end thereof is positioned within the pericardium. The defibrillation lead, with its electrode in a retracted position, is inserted through the sheath until the electrode is likewise positioned within the pericardium. The electrode is deployed in order to make contact with a large area of tissue within the pericardium. Additional leads and electrodes may be introduced and deployed in a like manner.

USE - For positioning a defibrillation electrode within the pericardial space of the heart of a patient. (18pp Dwg.No.2b/12

Title Terms: IMPLANT; SELF; ANCHOR; EPICARDIUM; DEFIBRILLATE; ELECTRODE; SHEATH; INTRODUCING; GUIDE; WIRE; INSERT; TISSUE; ONE; END; PERICARDIUM

Derwent Class: P34; S05

International Patent Class (Additional): A61N-001/39

File Segment: EPI; EngPI

8/5/12 (Item 12 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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003732242

WPI Acc No: 1983-728440/198331

XRPX Acc No: N83-136448

**Plastic surgery of thoracic carinate deformation - by longitudinal skin resection**

Patent Assignee: PROSTHESIS CONS RES (PROS-R)

Inventor: KONDRASHIN N I

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
SU 963512	A	19821007				198331 B

Priority Applications (No Type Date): SU 3262630 A 19810318

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
SU 963512	A		2		

Abstract (Basic): SU 963512 A

The method prevents recurrence of thoracic deformation. Skin is longitudinally dissected from manubrium to lines alba abdominis 4cm **below** the **xiphoid** process. Sternum is then dissected transversally, at the level of the 1st-2nd intercostal space and the changed sternum is resected on both sides, at a distance of 0.5cm from the place of attachment of the ribs, from the 2nd to 7th ribs. The resected edges of the sternum are lined up with the ribs with nodal sutures. 2nd rib is fixed to manubrium, and the xiphoid process is sutured with the abdominal muscles, leaving drainage behind the sternum.

Thoracic plastic surgery by this method was applied to a patient with congenital carinate deformation of the thorax. The operating wound easily healed and cosmetic result was excellent. Bul. 37/7.10.82. (2pp)

Title Terms: PLASTIC; SURGICAL; THORAX; DEFORM; LONGITUDE; SKIN; RESECTION

Derwent Class: P31

International Patent Class (Additional): A61B-017/00

File Segment: EngPI

8/5/13 (Item 13 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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003288851

WPI Acc No: 1982-D6862E/198213

**Permanent epicardial pacing or drainage medical appts. - includes cylindrical member with open end portions and connecting slot between inner and outer wall portions**

Patent Assignee: UNIV VIRGINIA PATENTS FOUND (UYVI-N)

Inventor: CROSBY I K

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 4319562	A	19820316				198213 B

Priority Applications (No Type Date): US 7961408 A 19790727; US 77865173 A 19771228

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 4319562	A		4		

Abstract (Basic): US 4319562 A

The appts. provides permanent epicardial pacing comparable to permanent transvenous pacing in the acutely ill or debilitated patient under local anesthesia and for drainage of pericardial fluid and pericardial biopsy. A guard member is provided at the first end portion of the cylindrical member adjacent to the slot. A manoeuvring member is connected to the outer wall portion at the second end portion of the cylindrical member.

The epicardial pacing method includes the steps of making a keyhole incision **below** a **xiphoid** process of a body, introducing a pericardioscope into a retro-sternal space of the body, making a cruciate incision in the pericardial cavity of the heart, screwing myocardial electrodes into a right ventricle of the heart, removing the pericardioscope from the retro-sternal space; attaching electrodes subcutaneously into a pocket in the left upper quadrant of the abdomen, and attaching a pulse generator to the electrodes to provide epicardial pacing.

Title Terms: PERMANENT; EPICARDIUM; PACE; DRAIN; MEDICAL; APPARATUS;

CYLINDER; MEMBER; OPEN; END; PORTION; CONNECT; SLOT; INNER; OUTER; WALL;

PORTION

Index Terms/Additional Words: PER; CARDIAC; FLUID; BIOPSY  
Derwent Class: P31; S05  
International Patent Class (Additional): A61B-019/00  
File Segment: EPI; EngPI

8/5/14 (Item 14 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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002300000

WPI Acc No: 1980-A6432C/198003

**Epicardial inspection and pacing instrument - comprises bevelled edge  
cylinder contg. fibre-optic cable and electrodes**

Patent Assignee: UNIV VIRGINIA (UYVI-N)

Inventor: CROSBY I K

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 4181123	A	19800101				198003 B

Priority Applications (No Type Date): US 77865173 A 19771228; US 7961408 A  
19790727

Abstract (Basic): US 4181123 A

A cylindrical member has two open end portions, an inner and outer wall portion and a connecting slot between the inner and outer walls. A guard is provided at the end of the cylindrical member adjacent to the slot and a manoeuvring member connected to the outer wall portion at the second end portion of the cylindrical member.

The epicardial pacing method includes the making a keyhole incision below a xyphoid process of a body, introducing a pericardioscope into a retrosternal space of the body, making a cruciate incision in the pericardial cavity of the heart, screwing myocardial electrodes into a right ventricle of the heart, removing the pericardioscope from the retro-sternal space; attaching electrodes subcutaneously into a pocket in the left upper quadrant of the abdomen, and attaching a pulse generator to the electrodes to thereby provide epicardial pacing.

Title Terms: EPICARDIUM; INSPECT; PACE; INSTRUMENT; COMPRISE; BEVEL; EDGE;  
CYLINDER; CONTAIN; FIBRE-OPTIC; CABLE; ELECTRODE

Index Terms/Additional Words: CARDIAC

Derwent Class: P31

International Patent Class (Additional): A61B-001/06

File Segment: EngPI

Set	Items	Description
S1	14	SUB() (XIPHOID? OR XYPHOID?) OR SUBXIPHOID? OR SUBXYPHOID? - OR (INFERIOR OR BELOW) (2N) (XIPHOID? OR XYPHOID?)
S2	26241	ENDOSCOP?
S3	60383	HEART OR CARDIO? OR CARDIA?
S4	21	S1 OR (INFERIOR OR BELOW) (2N) (STERNUM OR STERNAL)
S5	1	S4 AND S2 AND S3
S6	14	S1
S7	14	IDPAT (sorted in duplicate/non-duplicate order)
S8	14	IDPAT (primary/non-duplicate records only)

?show files

File 347:JAPIO Oct 1976-2002/Jul(Updated 021104)  
(c) 2002 JPO & JAPIO

File 350:Derwent WPIX 1963-2002/UD,UM &UP=200276  
(c) 2002 Thomson Derwent

File 371:French Patents 1961-2002/BOPI 200209  
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9/5,K/1 (Item 1 from file: 348)  
 DIALOG(R) File 348:EUROPEAN PATENTS  
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01089351

**Devices for performing vascular anastomoses**  
**Vorrichtungen zur Ausführung von vaskulären Anastomosen**  
**Dispositifs de réalisation d'anastomoses vasculaires**

PATENT ASSIGNEE:

Cedars-Sinai Medical Center, (544525), 8700 Beverley Boulevard, Los Angeles, CA 90048, (US), (Applicant designated States: all)

INVENTOR:

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Barath, Peter, 3 Hampton Drive, Oak Brook, Illinois 60521, (US)

LEGAL REPRESENTATIVE:

Stoppkotte, Cornelia, Dr. et al (87431), Winter, Brandl et al. and Attorney at Law Helmut E. Hubner, Alois-Steinecker-Strasse 22, 85354 Freising, (DE)

PATENT (CC, No, Kind, Date): EP 956825 A2 991117 (Basic)  
 EP 956825 A3 991124

APPLICATION (CC, No, Date): EP 99116501 961003;

PRIORITY (CC, No, Date): US 538575 951003; US 705190 960829

DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE

RELATED PARENT NUMBER(S) - PN (AN):

EP 915677 (EP 96934040)

INTERNATIONAL PATENT CLASS: A61B-017/11

ABSTRACT EP 956825 A3

A method and devices are provided for performing end-to-side anastomoses between the severed end of a first hollow organ and the side-wall of a second hollow organ utilizing transluminal approach with endoscopic assistance, wherein the first and second hollow organs can be secured utilizing a biocompatible glue, clips or by suturing.

These methods and devices find particular utility in coronary bypass surgery, including, in particular, where the first hollow organ is the left internal mammary artery (LIMA) and the second hollow organ is the left anterior descending coronary artery (LAD).

ABSTRACT WORD COUNT: 91

NOTE:

Figure number on first page: 5

LEGAL STATUS (Type, Pub Date, Kind, Text):

Examination: 001122 A2 Date of dispatch of the first examination report: 20001005

Change: 20000105 A2 Inventor information changed: 19991112

Withdrawal: 011031 A2 Date application deemed withdrawn: 20010418

Application: 991117 A2 Published application without search report

Examination: 991117 A2 Date of request for examination: 19990823

Search Report: 991124 A3 Separate publication of the search report

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	9946	1213
SPEC A	(English)	9946	9133
Total word count - document A			10346
Total word count - document B			0
Total word count - documents A + B			10346

...SPECIFICATION context of coronary artery disease, the flow of oxygenated blood to the myocardium of the **heart** is inhibited by a stenosis or obstruction in the coronary artery. This flow can be...

...cutting and peeling back various layers of tissue in order to give access to the **heart** and arterial sources. As a result, these operations typically require large numbers of sutures or...used to directly



visualize the thoracic cavity and obtain a left lateral view of the heart 18.

Based upon (a) direct visualization using the endoscopic telescope; (b) the location of the arterial source (in this case, the LIMA 10), the heart 18 and the coronary artery (in this case, the LAD 12); and (c) the anatomy...

...and into the thoracic cavity, and the third trocar and trocar port 22 through the subxyphoid space. Additional trocars or other instruments can be inserted as necessary. Often, it will be...establish the anastomosis, it is contemplated that the procedure can be performed on the beating heart .

In an alternative embodiment shown in FIGS. 10-11, the LIMA 10 and LAD 12...

...S., Inc. of New York and a gelatin-resorcine-formyl biological glue distributed by Laboratories Cardial .

As discussed in connection with the clipping devices shown in FIGS. 8-9, the distal...

...establish the anastomosis expeditiously, and, therefore, that the procedure can be performed on the beating heart .

Where the anastomosis is to be performed on the beating heart , it is advantageous to slow the heart to 30-40 beats per minute by the intravenous administration of beta blockers. This slowing of the heart will facilitate securement of the LIMA to the LAD without the necessity of inducing cardiac arrest. Even where it is contemplated that the procedure will be performed on the beating heart , prophylactic measures should be taken so that femoral to femoral cardiopulmonary bypass can be initiated if necessary. Where the method is to be applied to surgery on an arrested heart , preparations should be made for femoral to femoral cardiopulmonary bypass.

Once the anastomosis is established, the ligature around the cutter catheter 14 is released...establish the anastomosis, it is contemplated that the procedure can be performed on the beating heart .

Although a particular form of the invention has been illustrated and described, it will be...

9/5,K/2 (Item 2 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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00699239

Improved implantable defibrillator electrodes and methods of implanting same.

Implantierbare Elektroden für Defibrillator und Implantierungsverfahren dafür.

Electrodes pour defibrillateur implantable, et methode d'implantation.

PATENT ASSIGNEE:

Fogarty, Thomas J., (322081), 3270 Alpine Road, Portola Valley, California 94028, (US), (applicant designated states:

AT;BE;CH;DE;DK;ES;FR;GB;GR;IE;IT;LI;LU;MC;NL;PT;SE)

INVENTOR:

Fogarty, Thomas J., 5660 Alpine Road, Portola Valley, California 94028, (US)

Howell, Thomas A., 567 Homer, Palo Alto, California 94301, (US)

LEGAL REPRESENTATIVE:

Schmitz, Jean-Marie et al (19233), Dennemeyer & Associates Sarl P.O. Box 1502, L-1015 Luxembourg, (LU)

PATENT (CC, No, Kind, Date): EP 665030 A2 950802 (Basic)  
EP 665030 A3 980114

APPLICATION (CC, No, Date): EP 95630004 950126;

PRIORITY (CC, No, Date): US 188573 940128

DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE

INTERNATIONAL PATENT CLASS: A61N-001/05;

ABSTRACT EP 665030 A2

Improved implantable defibrillator electrodes and methods of implanting such electrodes are disclosed. One embodiment of the defibrillator electrodes includes a flexible conductive mesh and non-conductive mesh. Another embodiment of the defibrillator electrodes includes a flexible conductive mesh, a non-conductive mesh and an insulator therebetween. A third embodiment of the defibrillator electrode compensates for the shape of a human **heart**.

Methods for implanting the defibrillator electrodes include rolling an electrode and inserting the rolled electrode into a subxiphoid opening while thorascopically observing the insertion and manipulation of the defibrillator electrode. (see image in original document)

ABSTRACT WORD COUNT: 96

LEGAL STATUS (Type, Pub Date, Kind, Text):

Withdrawal: 010117 A2 Date application deemed withdrawn: 20000801  
Application: 950802 A2 Published application (A1with Search Report  
;A2without Search Report)  
Search Report: 980114 A3 Separate publication of the European or  
International search report  
Examination: 980513 A2 Date of filing of request for examination:  
980313

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPAB95	966
SPEC A	(English)	EPAB95	4214
Total word count - document A			5180
Total word count - document B			0
Total word count - documents A + B			5180

...ABSTRACT therebetween. A third embodiment of the defibrillator electrode compensates for the shape of a human **heart**.

Methods for implanting the defibrillator electrodes include rolling an electrode and inserting the rolled electrode...

...SPECIFICATION surgery.

2. Discussion of the Prior Art

It is well known in the field of **cardiology** that certain types of **cardiac** arrhythmias known as ventricular tachycardia and fibrillation can be effectively treated by the application of electrical energy in the form of pulses to the **heart** to defibrillate the fibrillating tissues. Such defibrillation may be achieved by the application of such...

...electrodes applied to the chest of a patient or applied directly to a patient's **heart** tissue, if patient's chest is open during surgery.

More recent improvements have led to the development of implantable defibrillators which automatically monitor the **heart** for arrhythmia and initiate defibrillation when arrhythmia is sensed. Such devices typically incorporate electrodes which are located either next to the **heart** or on an intravascular catheter, or both. Because the electrodes are closer to the **heart** tissue, than is the case with electrical paddles applied to the chest, implanted defibrillators require...

...OF THE INVENTION

The method of the present invention provides access to the pericardium and **heart** through small multiple opening sites (under 12 millimeter diameter) made in the chest and xiphisternal...

...of Figure 3 illustrating the placement of a defibrillator electrode between the pericardium and the **heart**;

Figure 5 is an exploded perspective view of a third embodiment of a defibrillator electrode...

...illustrating the placement of the defibrillator electrode of Figure 5 between the pericardium and a **heart**;

Figure 8 is a diagrammatic perspective view illustrating ...of defibrillator electrodes between the pericardium and both the front and

rear surfaces of the **heart** . In particular, a first opening 10, such as an incision or puncture is made in...

...the eye piece.

A second opening 20, such as an incision or puncture, which is **subxiphoid** , is then made and a second trocar 22 is inserted to point upward toward a...

...as well as later placement of a chest drainage tube. As explained further herein, an **endoscopic** type grasping instrument 26 is utilized to insert a rolled defibrillator electrode through the second...

...the defibrillator electrode 28. Such a positioned defibrillator electrode 30 is shown in phantom. An **endoscopic** type cutting instrument 32 is utilized, as explained further herein, to make an opening in...

...side of the patient 12, access is gained to both the back side of the **heart** and the front side of the **heart** for defibrillator electrode placement.

Referring now to Figure 2, there is shown an exploded perspective...

...of the electrode and of the physical shape and size of a particular patient's **heart** . The defibrillator electrode 36 consists of a platinum mesh 38 (only partially shown in Figure...backing 40, to thereby fixedly secure the defibrillator electrode 36 between the pericardium and the **heart** . In normal use the ends of the titanium staples 46, 48, 50 and 52 are...

...nylon cord. Once the defibrillator electrode 36 has been inserted between the pericardium and the **heart** , the tail 56 can be pulled to further position the defibrillator electrode 36. Then, if...

...to a curved or spherical surface. Since the front and the rear of a human **heart** are semi-spherical, the defibrillator electrode 57 shown in Figure 3, when placed between the pericardium and the **heart** , can more easily conform to the shape of the **heart** . As with the embodiment shown in Figure 2, the diameter of the platinum mesh 38...

...Figure 4, the defibrillator electrode 57 is shown placed between a pericardium 70 and a **heart** 72. In the preferred embodiment of the invention, the silicone backing 69 is secured to...

...fold over against that side of the silicone backing 69 which is adjacent to the **heart** 72. Such an arrangement not only holds the defibrillator electrode 57 more securely, but also minimizes the possibility of the staples touching the **heart** 72. Alternatively, the defibrillator electrode 57 may be secured to the pericardium 70 with sutures...

...the platinum mesh 38 of the defibrillator electrode 36 is generally in contact with the **heart** 72. The thickness of the silicone backing 69 is selected to accommodate the space between the pericardium 70 and the **heart** 72.

With reference now to Figure 5, there is illustrated a second alternative embodiment 78...

...it the tail 56. As explained and illustrated further herein, after appropriate positioning between a **heart** and a pericardium, the defibrillator electrode 78 is secured with a set of staples 84...

...electrode 36 of Figure 2 is illustrated in a rolled state. After placement between a **heart** and a pericardium, the rolled defibrillator electrode with the assistance of a pair of forceps...

...Figure 7 illustrates the placement of the defibrillator electrode 78 of Figure 5 between a **heart** 72 and a pericardium 70. As illustrated in Figure 7, the staples 84 and 88...

...78 of Figure 5 prevents contact between the staples 84, 86 and 88 and the **heart** 72 in the event of trauma which forces the pericardium 70

toward the **heart** 72.

In further detail, as the staples 84 and 88 have a length somewhat less ...electrode 78 is then pulled into its approximate position, between the pericardium 24 and the **heart** . Under direct thoracoscopic vision, the base of the tail of the defibrillator electrode is fixed...

...of a patient, a tunnel is dissected between the pericardium and the diaphragm from the **subxiphoid** opening toward the posterior aspect of the pericardium. In further detail, silicone tubing is utilized...  
...tunnel from the abdomen up to one end of the trocar 22 adjacent to the **subxiphoid** opening 22. The silicone tubing is grasped with a **endoscopic** grasping tool 26 and is pulled out of the patient 12 up through the trocar...

...defibrillator electrodes on the outside of the pericardium instead of between the pericardium in the **heart** . In such cases, the defibrillator electrodes illustrated in Figures 2 and 3 would be used...

...illustrates a final placement of the defibrillator electrode 78 between a pericardium 24 and a **heart** .

With reference now to Figure 13A, there is shown in phantom a second defibrillator electrode...

...to be positioned at to make contact with or near the rear side of the **heart** .

Figure 14 illustrates the final placement of the defibrillator electrode 78, after the openings 10...

...CLAIMS rolled defibrillator electrode through the subxiphoid opening to position the defibrillator electrode proximate to a **heart** ;  
applying a force to the defibrillator electrode to thereby position the defibrillator electrode; and  
securing...

...apparatus for transporting a rolled defibrillator electrode through an opening for implantation adjacent to a **heart** , comprising:  
a flexible sleeve having a tapered circumferentially enclosed first end, a partially enclosed second...

9/5,K/3 (Item 3 from file: 348)  
DIALOG(R)File 348:EUROPEAN PATENTS  
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00423001

**Transvenously placed defibrillation leads.**

**Intravenose Leitungen zur Defibrillation.**

**Conducteurs de defibrillation introduits par voie intraveineuse.**

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ABSTRACT EP 426090 A2

A system for positioning a defibrillation electrode about the **heart** includes means for placing the electrode (14) in contact with epicardial or pericardial tissue from an inferior vena cava (IVC) (22) access site.

A small hole (24) is made in the IVC (22) at the selected access site. A defibrillation lead (18) having the defibrillation electrode (14) near its distal end is transvenously inserted through the IVC (22) and out through the small hole (24) into a chest cavity adjacent the **heart**. The electrode (14) is then positioned so as to contact the desired **cardiac** tissue. If pericardial contact is to be made, the distal end of the lead (18), including the electrode (14), is looped around the pericardium. If epicardial contact is to be made, an additional small hole is made in the pericardium, and the distal end of the lead (18), including the electrode (14), is inserted through the additional hole into the pericardial space, and the electrode (14) is positioned to contact the desired epicardial tissue. (see image in original document)

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...ABSTRACT A2

A system for positioning a defibrillation electrode about the **heart** includes means for placing the electrode (14) in contact with epicardial or pericardial tissue from...

...IVC (22) and out through the small hole (24) into a chest cavity adjacent the **heart**. The electrode (14) is then positioned so as to contact the desired **cardiac** tissue. If pericardial contact is to be made, the distal end of the lead (18...

...SPECIFICATION provides an electrical stimulus to a patient in an area near, on or in the **heart** for the purpose of reviving a **heart** that is not beating in a manner sufficient to support life. While there are numerous medical terms that can be used to describe such a **heart**, such as **cardiac** arrest, ventricular fibrillation, and asystole, and while each term has a somewhat different technical meaning...

...of the patient. Hence, a defibrillation device is used in an attempt to get the **heart** beating again. To this end, a high energy stimulation pulse is delivered to or near the **heart** through one or more defibrillation leads, each lead having one or more electrodes at the...

...the defibrillation device could be made portable and adapted to respond automatically to a stopped **heart**. With such a portable device, the needed life-sustaining defibrillation pulses could be automatically provided...

...in U.S. Patent 3,866,615. The '615 patent teaches a light weight, portable **cardiac** emergency stimulator that includes separate defibrillation and pacemaker electronic circuits. The leads and electrodes used with the portable device are introduced into the patient's **heart** by a needle through the chest wall.

Implantable defibrillation devices have also been developed, as...

via the IVC is illustrated. Anatomically, the IVC 22 comes through the diaphragm (not shown...

...right by the right ventricle (RV) and connects to the right atrium (RA) of the **heart** 16. Hence, there is virtually no closer access to the pericardium and epicardium than through...

...enters the chest cavity 31 is in close proximity to the right ventricle of the **heart** . In fact, the typical human anatomy places an object emerging from the medial side of...

...the introducer into the chest cavity, position the electrode at a desired location on the **heart** , and then remove the introducer, leaving the lead and electrode in place.

The hole 24...lead having the electrode can be simply passed through the catheter and attached to the **heart** . For pericardial placement of one or more electrodes on or near the left ventricle, it...

...introducer 30 within the chest cavity until it is near the desired location on the **heart** where the electrode is to be placed. In any event, once the hole 24 has...

...lead 18 or introducer 30 inserted therethrough, the placement of the electrode(s) on the **heart** is readily carried out using techniques described in the referenced documents and known in the...

...desired position. To avoid puncturing coronary arteries during the lead deployment and fixation process, a **sub - xiphoid** or intercostal **endoscope** or a coronary angiography may be utilized.

The lead deployment shown in Fig. 4 is...

...3 except that only a single branch 38 of the lead 18 loops around the **heart** 16. In this case, the loop 38 is positioned lower on the **heart** 16 than is the loop 32 in Fig. 3, thereby positioning the electrode(s) included...

...separate leads 18(min) and 18 exit the IVC access hole 22 and contact the **heart** . The lead 18(min) includes at least one electrode 14(min), positioned near the left ventricle of the **heart** ; and the lead 18 includes at least one electrode 14 positioned near the right ventricle of the **heart** . As with the other lead deployment configurations, fixation means may be used to help anchor the electrodes to the desired tissue locations about the **heart** .

To limit the stress on the **heart** , a lead configuration such as is shown in Fig. 6 may be employed. This configuration...

...sections function as pseudo hinges, allowing the stiff sections to move or bend with the **heart** as the **heart** beats, rather than stretching.

Referring next to Fig. 7, a representation of one embodiment of... maneuvered through the opening 24 in the wall of the IVC 22 to its desired **cardiac** location. Furthermore, as shown in Fig. 9, which shows in partial sectional view the lead 19 deployed about the **heart** 16, the electrode 14 (the exposed half of the conductor 42) may be oriented to face towards the **heart** 16, thereby directing and concentrating the defibrillation energy towards the **heart** , and limiting such energy from being directed away from the **heart** .

Where intra-pericardial placement of the defibrillation electrodes is desired, it is first necessary to...

...pierced. This sheath provides a convenient mechanism for introducing and directing various implements to the **heart** .

One such implement is a tool 50 used to perforate the pericardium while sparing the...

...the IVC 22, through a pericardial hole 72, and into the pericardial space between the **heart** 16 and the pericardium 56. Both the IVC hole or opening 24 and the pericardial...

said **heart** so that the stiff sections hold the looped lead in place against the **heart** , and the flexible sections bend as the **heart** contracts and expands.

7. A defibrillation lead system comprising:

a sheath;

means for passing said sheath through to a pericardium surrounding a **heart** from a position within the inferior vena cava (IVC) adjacent said **heart** ;

a defibrillation lead having a distal electrode, said defibrillation lead being of a size that...

...said stiff sections being formed to encircle and conform with the basic shape of the **heart** , said flexible sections being formed to readily bend as said **heart** contracts and expands, whereby the stiff sections maintain contact with the contracting and expanding **heart** without having to stretch.

10. The defibrillation lead system of Claim 7 wherein said holding...

...said lead body, whereby said exposed conductive element may be selectively positioned relative to the **cardiac** tissue in order to make direct contact with desired tissue. ...

9/5,K/4 (Item 4 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00772145 \*\*Image available\*\*

**APPARATUS AND METHOD FOR ABLATING TISSUE**

**TECHNIQUES D'ABLATION DE TISSUS ET DISPOSITIF CORRESPONDANT**

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Detailed Description

Claims

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English Abstract

A control system (334) alters one or more characteristics of an ablating element (306) to ablate tissue. In one aspect, the control system (334) delivers energy nearer to the surface of the tissue by changing the frequency or power. In another aspect, the ablating element (306) delivers focused ultrasound which is focused in at least one dimension. The ablating device (306) may also have a number of ablating elements with different characteristics such as focal length.

#### French Abstract

L'invention concerne un systeme de commande (334) modifiant une ou plusieurs caracteristiques d'un element d'ablation (306) servant a l'ablation de tissus. Dans un de ces aspects, l'element d'ablation applique de l'energie plus pres de la surface des tissus en modifiant la frequence ou la puissance. Dans un autre aspect, l'element d'ablation (306) applique un ultrason focalise dans au moins une dimension. Le dispositif d'ablation (306) peut, en outre, comporter un certain nombre d'elements d'ablation presentant des caracteristiques differentes, la longueur focale notamment.

#### Legal Status (Type, Date, Text)

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Detailed Description

Claims

#### Detailed Description

... devices and methods for ablating tissue.

The diagnosis and treatment of electrophysiological diseases of the **heart**, and more specifically to devices and methods for epicardial mapping and ablation for the treatment...

...5 invention.

#### BACKGROUND OF THE INVENTION

Atrial fibrillation results from disorganized electrical activity in the **heart** muscle, or myocardium. The surgical maze procedure has been developed for treating atrial fibrillation and...

...an alternative to the surgical incisions used in the maze procedure, transmural ablation of the **heart** wall has been proposed. Such ablation may be performed either from within the chambers of the **heart** (endocardial ablation) using endovascular devices (e.g. catheters) introduced through arteries or veins, or from outside the **heart** (epicardial ablation) using devices introduced into the chest. Various ablation technologies have been proposed, including...

...ablation rather than surgical incisions is the ability to perform the procedure on the beating **heart** without the use of **cardiopulmonary** bypass.  
In performing the maze procedure and its variants, whether using ablation or surgical incisions...

...the surrounding myocardium. The pulmonary veins connect the lungs to the left atrium of the **heart**, and join the left atrial wall on the posterior side of the **heart**. This location creates significant difficulties for endocardial ablation devices for several reasons. First, while many...

...pulmonary venous lesions and to maintain in such positions against the wall of the beating **heart**. This is very time-consuming and can result in lesions which do not completely encircle...

...endovascular devices is often inadequate and knowing the precise position of such devices in the **heart** can be difficult, resulting in misplaced lesions. Fourth, ablation within the blood inside the **heart** can create thrombus which, in the right chambers, is generally filtered out by the lungs rather than entering the bloodstream. However, on the left side of the **heart** where the pulmonary venous lesions are formed, thrombus can be carried by

si

the bloodstream...

...be utilized epicardially to avoid the need for access into the left



chambers of the **heart** and to minimize the risk of producing thrombus.

Additional aspects of the present invention are directed to devices and methods for ablating tissue. Ablation of **heart** tissue and, specifically, ablation of tissue for treatment of atrial fibrillation is developed as a...

...a first embodiment, a method of forming a transmural lesion in a wall of the **heart** adjacent to the pulmonary veins comprises the steps of placing at least one ablation device...

...at least one ablation device is disposed in contact with an epicardial surface of the **heart** wall; positioning at least one ablation device adjacent to the pulmonary veins on a posterior aspect of the **heart** while leaving the pericardial reflections intact; and ablating the **heart** wall with at least one ablating device to create at least one transmural lesion adjacent to the pulmonary veins. While the method may be performed with the **heart** stopped and circulation supported with **cardiopulmonary** bypass, the method is preferably performed with the **heart** beating so as to minimize morbidity, mortality, complexity and cost. In another aspect of the invention, an apparatus for forming a transmural lesion in the **heart** wall adjacent to the pulmonary veins comprises, in a preferred embodiment, an elongated flexible shaft device attached to the working end for creating a transmural lesion in the **heart** wall; a control mechanism at the control end for manipulating the working end; and a...

...device configured to engage an anatomical structure accessible from within the chambers of the **heart** such as the coronary sinus (from the right atrium), pulmonary artery (from the right ventricle...

...mechanisms for maintaining contact between the ablation device and the interior surface of the **heart** wall.

In another aspect of the present invention, an anchor is used to hold part...

...ablating device is provided which may be used to ablate any type of tissue including **heart** tissue for the reasons described herein. The ablating device has a suction well and an...

...the device to the tissue to be ablated. The device is preferably used to ablate **cardiac** tissue from an epicardial location to form a transmural lesion. The device preferably includes a...it reaches another surface such as the endocardial surface on the other side of a **heart** chamber. The present invention reduces the likelihood of damage to other structures since the ultrasonic...the method of the invention.

Figure 10 is a posterior view of a patient's **heart** illustrating the use of the left and right ablation probes according to the method of the invention.

Figure 11 is a posterior view of a patient's **heart** illustrating a transmural lesion formed according to the method of the invention.

Figures 12 and...

...side views of the left ablation probe of the invention positioned on a patient's **heart**, showing a balloon and suction ports, respectively, on the inner probe.

Figure 14A shows the...a subxiphoid location, and advanced to the pulmonary veins on the posterior side of the **heart**. Shaft 52 will have dimensions, geometry and materials like those of shaft 21 of left...electromagnets, or power may be supplied by RF generator 140 through connectors 46, 64.

A **subxiphoid** incision (inferior to the **xiphoid** process of the

sternum) is made about 2-5 cm in length. Under direct vision through such incision or by visualization with an **endoscope**, a second small incision is made in the pericardium P (Figure 9). Left ablation probe 20 is introduced through these two incisions and advanced around the inferior wall of the **heart** H to its posterior side under fluoroscopic guidance using fluoroscope 146.

Alternative methods of visualization...

...vein LI is disposed in notch 34 as shown in the posterior view of the **heart** in Figure I 0.

Superior sub-probe 38 is then advanced distally from workinor end... through the subxiphoid incision and pericardial incision and advanced around the right side of the **heart** as shown in Figure 8.

Under fluoroscopic guidance, right ablation probe 22 is positioned such ...

...the pericardial reflections RS.

It should be noted that the pericardium P attaches to the **heart** at the pericardial reflections PR shown in Figures 10-1 1. Because of the posterior...

...in the vicinity of the pulmonary veins poses a risk of serious injury to the **heart** or pulmonary veins themselves. The apparatus and method of the present invention avoid this risk...

...Ablation probes 20, 22 may further be used for mapping conduction pathways io in the **heart** (local electrocardiograms) for the diagnosis of electrophysiological abnormalities.

This is accomplished by selecting any of...

...on the ablation probes and monitor the voltage. Various electrodes and various locations on the **heart** wall may be selected to develop a map of potential conduction pathways in the **heart** wall. If ablation treatment is then required, the steps outlined above may be performed to...

...and retraction devices may be introduced to move and hold tissue out of the way. **Cardiac** mapping and ablation devices may also be introduced to identify conduction pathways and to supplement...

...pulmonary veins.

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Additionally, ablation catheters may be introduced into the right chambers of the **heart**. or epicardial ablation devices may be introduced through incisions in the chest. to create other...

...or more expandable devices such as balloons which are inflated in the space between the **heart** and the pericardium to urge the ablation probe against the epicardial surface. An exemplary embodiment...

...surface of the pericardium P and urges inner probe 74 against the epicardial surface of **heart** H. This ensures close contact between electrodes 76 and the epicardium, and protects extracardiac tissue... uction is applied through suction port 156, inner probe 74 is drawn tightly against the **heart**, ensuring good contact between electrodes 76 and the epicardium. In a similar manner, superior subprobe...197 which receives electrical impulses. When the first electrode 194 emits a stimulus, launching a **cardiac** impulse, the impulse is transmitted through tissue to the sensing electrode 197 if a discontinuity...

...previously created lesion. The time between emission of the pacing stimulus to receipt of the **cardiac** impulse at the sensing electrode increases when a transmural ablation has been created between the...

...first transducer, the transducer moving upon inflation of the balloon.

73 A method of ablating **cardiac** tissue, comprising the step of:  
providing an ablating device including a body having a longitudinal...

...tissue beneath the gap between the first and second transducers;  
positioning the ablating device against **cardiac** tissue;  
55  
activating the first and second transducers to ablate **cardiac** tissue:  
moving the first transducer to ablate **cardiac** tissue beneath the cap  
between I I the first and second transducers.

74 The method...

...pivoting step is carried out by inflating the balloon.

75 A method of ablating a **cardiac** tissue, comprising the steps of:  
providing an ablating device having a first transducer and a second  
transducer,  
positioning the ablating device against **cardiac** tissue;  
activating the first transducer at a first frequency to ablate **cardiac**  
tissue; and activating the second transducer at a second frequency to  
ablate **cardiac** tissue.

76 The method of claim 75, further comprising the step of:  
moving the ablating device so that the activating steps are carried out  
to ablate the same **cardiac** tissue.

77 The method of claim 75, wherein:  
the activating steps are carried out to ablate different **cardiac**  
tissue.

78 The method of claim 75, further comprising:  
characterizing at least a portion of the **cardiac** tissue; and  
selecting at least one of the first and second transducers to ablate the  
at least portion of the **cardiac** tissue based upon the characterizing  
step.

79 A method of ablating a **cardiac** tissue, comprising the steps of:  
providing an ablating device having a first transducer and a...

...focused, the first and second transducers having  
different focal lengths;  
positioning the ablating device against **cardiac** tissue;  
activating the first transducer to ablate **cardiac** tissue; and  
activating the second transducer.

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I 80. The method of claim 79, wherein...has a different focal length than  
the first ablating element.

98 A device for ablating **cardiac** tissue, comprising:  
an ablating element which emits focused ultrasound which is focused in at  
least...

9/5,K/5 (Item 5 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00731366 \*\*Image available\*\*

INTRA-PERICARDIAL DELIVERY OF ANTI-MICROTUBULE AGENTS  
ADMINISTRATION D'AGENTS ANTI-MICROTUBULES A L'INTERIEUR DU PERICARDE  
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Detailed Description

Claims

Fulltext Word Count: 21821

English Abstract

Methods and compositions are provided for intra-pericardial administration of anti-microtubule agents, suitable for use in treating or preventing a variety of diseases of the pericardium, **heart**, or, coronary vasculature.

French Abstract

Cette invention concerne des procedes et des compositions concernant l'administration d'agents anti-microtubules a l'interieur du pericarde, adaptes au traitement et a la prevention de differents troubles touchant le systeme vasculaire pericardique, **cardiaque** ou coronaire.

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Detailed Description

Claims

English Abstract

...agents, suitable for use in treating or preventing a variety of diseases of the pericardium, **heart**, or, coronary vasculature.

French Abstract

...adaptes au traitement et a la prevention de differents troubles touchant le systeme vasculaire pericardique, **cardiaque** ou coronaire.

## Detailed Description

... administering anti-microtubule agents into the pericardium.

### BACKGROUND OF THE INVENTION

According to U.S. **Heart** and Stroke Foundation estimates, over 60 million

Americans have one or more forms of **cardiovascular** disease. These diseases claim approximately 1 million lives each year (41% of all deaths in...

...the effectiveness of invasive treatments for vascular diseases.

Restenosis has been a major challenge to **cardiovascular** research for the past 15 years.

Currently, no existing, FDA approved, treatment for the prevention...

...of severe narrowing of the vasculature, about one-third of patients undergoing balloon angioplasty (source **Heart** and Stoke Foundation homepage) have renewed narrowing of the treated arteries (restenosis) within 6 months...

...and methods for intrapericardially delivering an anti-microtubule agent so that disease within the pericardium, **heart**, or coronary vasculature (e.g., restenosis, primary stenosis, or, atherosclerosis) may be treated or prevented...

...an anti-microtubule agent, suitable for treating or preventing disease of the 15 pericardium, **heart**, or, coronary vasculature. The anti-microtubule agent is administered into the pericardial sac (i.e...

...chest wall, through the myocardium, or through the vessel wall of the vasculature supplying the **heart**, with or without radiographic guidance.

Similarly, the agent can be placed in the pericardial cavity...

...anti-microtubule is present at the disease site in sufficient doses to favorably impact on **cardiac** conditions such as coronary stenosis, restenosis, in-stent restenosis, and atherosclerosis; surgical adhesions following **cardiac** surgery (open, endoscopic, or catheter -based); stenosis or failure of valve replacement surgery; accelerated atherosclerosis following **cardiac** transplantation; immunological rejection following **cardiac** transplantation (host vs. graft disease); **cardiac** rhythm abnormalities; rheumatic or inflammatory diseases with **cardiac** manifestations (i.e., rheumatoid arthritis, systemic lupus erythematosus, vasculitis); infections of the myocardium or surrounding ...noted above, the present invention provides methods for treating or preventing disease of the pericardium, **heart**, or coronary vasculature, comprising the step of administering to the pericardium, **heart** or, coronary vasculature an anti-microtubule agent.

The anti-microtubule is presented to the disease site in sufficient doses to favorably impact on **cardiac** conditions such as coronary stenosis, restenosis, in-stent restenosis, and atherosclerosis; surgical adhesions following **cardiac** surgery (open, endoscopic, or catheterbased); stenosis or failure of valve replacement surgery; restenosis following **cardiac** shunt procedures; accelerated atherosclerosis following **cardiac** transplantation; immunological rejection following **cardiac** transplantation (host vs. graft disease); **cardiac** rhythm abnormalities; rheumatic or inflammatory diseases with **cardiac** manifestations (i.e., rheumatoid arthritis, systemic lupus erythematosus, vasculitis); infections of the myocardium or surrounding...chest wall, through the myocardium, or through the vessel wall of the vasculature supplying the **heart**, with or without radiographic guidance. Similarly, the agent can be placed in the pericardial cavity...

...administered via the catheter into the pericardial space.

In open procedures, access to the pericardium, **heart**, or coronary

vasculature is gained operatively, by, for example, **sub - xiphoid** entry, a thoracotomy, open **heart** surgery, or **endoscopic** procedures. Preferably, the thoracotomy should be minimal, through an intercostal space for example. Fluoroscopy, or...

...procedures. The anti-microtubule agent is then administered directly to the required site on the **heart** surface (e.g., the coronary arteries) as a paste, gel, wrap or solution. This placement...

...by the surgeon directly (open surgery) or via 15 a delivery port in a **endoscopic** device (**endoscopic** surgery).

The anti-microtubule agent is administered in a dosage and formulation which results in...

...methods described herein are suitable for the treatment of a variety of diseases of the **heart** and surrounding tissues, including, but not limited to: coronary stenosis, restenosis, instant restenosis, and atherosclerosis; surgical adhesions following **cardiac** surgery (open, endoscopic, or catheter-based); stenosis or failure of valve replacement surgery; restenosis following **cardiac** shunt procedures; accelerated atherosclerosis following **cardiac** transplantation; immunological rejection following **cardiac** transplantation (host vs. graft disease); **cardiac** rhythm abnormalities; rheumatic or inflammatory diseases with **cardiac** manifestations (i.e., rheumatoid arthritis, systemic lupus erythematosus, vasculitis); infections of the myocardium or surrounding ...the indication.

For certain clinical indications (e.g., the treatment of instant restenosis, restenosis following **cardiac** bypass surgery), the anti-microtubule agent may also be administered directly to the surface of...

...prolong the effectiveness of PTCA or stenting, or preserve myocardial perfusion as demonstrated by standard **cardiac** function and radiographic methods.

#### TREATMENT OF ATHEROSCLEROSIS

For the treatment of progressive atherosclerosis, an anti...

...progression of atherosclerosis or stabilize atherosclerotic plaques.

In the case of accelerated atherosclerosis associated with **cardiac** transplantation, paclitaxel can be administered in a slow release form that delivers a total dose...

...the incidence of total occlusion (myocardial infarction), or preserve myocardial perfusion as demonstrated by standard **cardiac** function and radiographic methods.

#### TREATMENT OF TRANSPLANT REJECTION

In the case of organ rejection associated with **cardiac** transplantation, paclitaxel can be administered in a slow release form that delivers a total dose...

...required) to help prevent transplant rejection.

#### TREATMENT OF ARTERITIS AND OTHER RHEUMATIC CONDITIONS AFFECTING THE **HEART**

Several rheumatic diseases are associated with **cardiac** manifestations, such as arteritis, systemic lupus erythematosus, and rheumatoid arthritis. As described herein, antimicrotubule agents...are responsive to anti-microtubule drugs such as paclitaxel.

#### TREATMENT VALVULAR STENOSIS AND SHUNT RESTENOSIS

**Cardiac** surgery is often performed to replace the patient's leaking or obstructed valves with porcine or mechanical **heart** valves. A complication of this procedure is that scarring of the annular ring of

Claim

1 A method for treating or preventing disease of the pericardium, **heart** ,  
or coronary vasculature, comprising administering intrapericardially to a patient an antimicrotubule agent, such that said disease of the pericardium, **heart** , or coronary vasculature is treated or prevented.

2 The method according to claim 1 wherein...

...The method according to claim 1 wherein said disease is a rheumatic condition affecting the **heart** .

15 The method according to claim 1 wherein said disease is valvular stenosis.

16 The...

...disease is shunt restenosis.

17 The method according to claim 1 wherein said disease is **cardiac** adhesion.

18 The method according to claim 1 wherein said disease is a malignant pericardial effusion.

19 The method according to claim 1 wherein said disease is a **cardiac** rhythm disorder.

63

Figure 1

Intrapericardial Micellar

Paclitaxel = Treatment Protoc

I

I @

Figure 2

Fracture...

9/5,K/6 (Item 6 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00553477 \*\*Image available\*\*

APPARATUS AND METHOD FOR DIAGNOSIS AND THERAPY OF ELECTROPHYSIOLOGICAL DISEASE

APPAREIL ET METHODE DE DIAGNOSTIC ET DE TRAITEMENT D'UNE AFFECTION ELECTROPHYSIOLOGIQUE

Patent Applicant/Assignee:

EPICARDIA INC,

Inventor(s):

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PLESS Benjamin,

GALLUP David A,

ULSTAD Jack E Jr,

ANDERSON Scott C,

RICHMAN Roxanne L,

MERRICK Daniel D,

SHAH Ajit S,

deCLERCQ Casper,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200016850 A1 20000330 (WO 0016850)

Application: WO 99US21699 19990920 (PCT/WO US9921699)

Priority Application: US 98157824 19980921

Designated States: AU CA JP AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

Main International Patent Class: A61N-001/00

Publication Language: English

Fulltext Availability:  
Detailed Description  
Claims  
Fulltext Word Count: 7938

#### English Abstract

An apparatus and method for mapping conduction pathways, and creating lesions in the **heart** wall for the treatment of atrial fibrillation. The apparatus may include at least one epicardial ablation probe (20) having a plurality of electrodes for creating a lesion. The apparatus and method facilitate the formation of a lesion which electrically isolates the pulmonary veins from the surrounding myocardium.

#### French Abstract

L'invention concerne un appareil et une methode de mise en correspondance de voies de conduction et de creation de lésions dans la paroi **cardiaque** pour traiter une fibrillation auriculaire. L'appareil peut comprendre au moins une sonde (20) d'ablation epicardique possédant plusieurs électrodes destinées à créer une lésion. L'appareil et la methode facilitent la formation d'une lésion isolant électriquement les veines pulmonaires du myocarde qui les entoure.

Fulltext Availability:  
Detailed Description  
Claims

#### English Abstract

An apparatus and method for mapping conduction pathways, and creating lesions in the **heart** wall for the treatment of atrial fibrillation. The apparatus may include at least one epicardial...

#### French Abstract

...mise en correspondance de voies de conduction et de creation de lésions dans la paroi **cardiaque** pour traiter une fibrillation auriculaire. L'appareil peut comprendre au moins une sonde (20) d...

#### Detailed Description

... INVENTION

This invention relates generally to the diagnosis and treatment of electrophysiological diseases of the **heart**, and more specifically to devices and methods for epicardial mapping and ablation for the treatment

...atrial fibrillation.

#### BACKGROUND OF THE INVENTION

Atrial fibrillation results from disorganized electrical activity in the **heart** muscle, or myocardium. The surgical maze procedure has been developed for treating atrial fibrillation and...

...only requires a median sternotomy or other form of gross thoracotomy for access to the **heart**, but requires stopping the **heart** and establishing **cardiopulmonary** bypass, to which a significant part of the trauma, morbidity and mortality of the maze...

...invasive alternative to the surgical incisions used in the maze procedure, transmural ablation of the **heart** wall has been proposed. Such ablation may be performed either from within the chambers of the **heart** (endocardial ablation) using endovascular devices (e.g. catheters) introduced through arteries or veins, or from outside the **heart** (epicardial ablation) using devices introduced into the chest through surgical incisions. Various ablation technologies have...

...by the lungs rather than entering the bloodstream. However, on the left side of the **heart** where the pulmonary venous lesions are formed, thrombus can be carried by the bloodstream into...

...the invention are more easily visualized, faster to use, and more



accurately positionable than known **cardiac** ablation catheters and devices, enable the formation of continuous, uninterrupted lesions around the pulmonary veins...

...a first embodiment, a method of forming a transmural lesion in a wall of the **heart** adjacent to the pulmonary veins comprises the steps of placing at least one io ablation...

...at least one ablation device is disposed in contact with an epicardial surface of the **heart** wall; positioning the at least one ablation device adjacent to the pulmonary veins on a posterior aspect of the **heart** while leaving the pericardial reflections intact; and transmurally ablating the **heart** wall with the at least one ablating device to create at least one transmural lesion...

...puncture, incision, or access port in the chest, either between the ribs or in a **subxiphoid** position, for minimal trauma, with visualization provided by fluoroscopy, **endoscopy**, transesophageal echocardiography, or other conventional form of minimally-invasive imaging. While the method may be performed with the **heart** stopped and circulation supported with **cardiopulmonary** bypass, the method is preferably performed with the **heart** beating so as to minimize morbidity, mortality, complexity and cost.

In another aspect of the invention, an apparatus for forming a transmural lesion in the **heart** wall adjacent to the pulmonary veins comprises, in a preferred embodiment, an elongated flexible shaft...

...an ablation device attached to the working end for creating a transmural lesion in the **heart** wall; a control mechanism at the control end for manipulating the working end; and a...

...apparatus and methods of the invention are further useful for mapping conduction pathways in the **heart** (local electrograms) for the diagnosis of electrophysiological diseases. Any of the electrodes on the apparatus the **heart** by delivering current through one or more selected electrodes at io levels sufficient to stimulate **heart** contractions.

Additionally, although the ablation apparatus and methods of the invention are preferably configured for...

...locating device configured to engage an anatomical structure accessible from within the chambers of the **heart** such as the coronary sinus (from the right atrium), pulmonary artery (from the right ventricle)...

...other mechanisms for maintaining contact between the ablation device and the interior surface of the **heart** wall.

In another aspect of the present invention, an anchor is used to hold a ...

...the method of the invention.

Figure 10 is a posterior view of a patient's **heart** illustrating the use of the left and right ablation probes according to the method of the invention.

Figure 11 is a posterior view of a patient's **heart** illustrating a transmural lesion formed according to the method of the invention.

Figures 12 and...

...side views of the left ablation probe of the invention positioned on a patient's **heart**, showing a balloon and suction ports, respectively, on the inner probe.

Figure 14 shows the...the pericardial reflections RS.

...end;  
an ablation device attached to the working end for creating a lesion in  
the **heart**  
wall;  
a control mechanism at the control end for manipulating the working end;  
and a...

...end;  
an ablation device attached to the working end for creating a lesion in  
the **heart**  
wall;  
a control mechanism at the control end for manipulating the working end;  
and  
an...

...tissues therefrom.

16 A method of electrophysiological diagnosis or treatment of a wall of  
the **heart**, the **heart** being surrounded by a pericardium, comprising:  
providing an electrophysiology apparatus having a working end, an...

...pericardium;  
engaging the locating device with an anatomical structure within the  
pericardium and outside the **heart**;  
positioning the electrode at a predetermined location relative to the  
locating device while maintaining the...

...with the anatomical  
io structure; and  
conducting current to or from the electrode and the **heart** wall.  
17 The method of claim 16 wherein the step of conducting current  
comprises ablating the **heart** wall to form a transinural lesion therein.

18 A method of ablating tissue from an...

...tissue with the ablating device.

19 A method of creating a continuous ablation lesion in **heart** tissue  
underlying a pericardial reflection, comprising the steps of:  
providing a first ablating device and...

...the first and second ablating devices to form a continuous, i i lesion  
in the **heart** tissue underlying the pericardial reflection.

20 A method of ablating tissue, comprising the steps of...22 A method of  
forming ablations to electrically isolate a structure of a  
patient's **heart**, comprising the steps of:  
providing a first ablating device having a first ablating element;  
introducing...

...positioning a part of the first ablating device against a structure of  
the patient's  
**heart**;  
moving another part of the ablating device around the structure of the  
patient's  
**heart** after the positioning step; and  
ablating tissue to create a lesion with the first ablating...

9/5,K/7 . (Item 7 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00482584 \*\*Image available\*\*  
DIRECT PERICARDIAL ACCESS DEVICE AND METHOD  
PROCEDE ET DISPOSITIF D'ACCES PERICARDIQUE DIRECT  
Patent Applicant/Assignee:  
COMEDICUS INCORPORATED,

Inventor(s):

SCHMIDT Cecil C,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9913936 A1 19990325

Application: WO 98US19524 19980918 (PCT/WO US9819524)

Priority Application: US 97933858 19970919

Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES  
FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD  
MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ  
VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH  
CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW  
ML MR NE SN TD TG

Main International Patent Class: A61M-031/00

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 4977

#### English Abstract

The invention is directed to a device and method for minimally invasive access to the pericardial space of a human or animal patient. The disclosed pericardial access device includes a penetrating body (12) axially mobile within the lumen (13) of a guide tube (14). The distal end of the guide tube includes a shoulder to buttress pericardial tissue drawn into the guide tube by a suction force applied to the guide tube lumen. The penetrating body (12) is subsequently distally advanced within the guide tube to access the pericardium (2).

#### French Abstract

La presente invention concerne un procede et un dispositif permettant un acces invasif a minima dans l'espace pericardique d'un patient ou d'un animal. Le dispositif d'accès pericardique comprend un corps transfixiant (12) axialement mobile dans la lumiere (13) d'un tube de guidage (14). L'extremite distale du tube comprend un epaulement soutenant le tissu pericardique tire dans le tube par une force d'aspiration appliquee a la lumiere du tube. Le corps transfixiant (12) avance, ensuite, distalement dans le tube de facon a acceder au pericarde (2).

Fulltext Availability:

Detailed Description

#### Detailed Description

... DEVICE AND METHOD

Field of the Invention

The present disclosure is directed to minimally invasive **cardiac** procedures. More specifically, the disclosure provides a device and method for accurate local access to...

...tenn 44 pericardium." The pericardium (pericardial sac) is a conical membranous sac in which the **heart** and the commencement of the great vessels are contained. Gray's Anatomy (1977 ed.) pp...

...The pericardium is fluid-filled and functions to prevent dilation of the chambers of the **heart**, lubricates the surfaces of the **heart**, and maintains the **heart** in a fixed geometric position. It also provides a barrier to the spread of infection...

...adjacent structures in the chest cavity and prevents surrounding tissue(s) from adhering to the **heart**. The space between the pericardium and the **heart**, known as the pericardial space, is normally small in volume and includes the fluid therein...

...atrioventricular and interventricular grooves, but not over the ventricular surfaces. See, Shabetai R, "Pericardial and **Cardiac** Pressure," in Circulation, 77:1 (1988).

Pericardiocentesis, or puncture of the pericardiurn, heretofore has been...

...study of the pericardial fluid; 2) withdrawal of pericardial fluid for the treatment of acute **cardiac** tamponade; and 3) infusion of therapeutic agents for the treatment of malignant effusion or tumors...

...or fibrinolytic agents such as streptokinase.

Intrapericardial drug delivery has not been clinically utilized for **heart** -specific treatments where pericardial pathology is normal, because the pericardial space is normally small and very difficult to access without invasive surgery or risk of **cardiac** injury by standard needle pericardiocentesis techniques.

Normally, pericardiocentesis procedures are carried out by highly specialized, personnel in the **cardiac** catheterization laboratory of medical facilities, assisted by fluoroscopy and electrocardiogram monitoring equipment. Electrocardiographic monitoring of...

...Medicine, 264:711 (1961); Gotsman M.S., et al. "A Pericardiocentesis Electrode Needle," in Br. **Heart** J., 28:566 (1966); and Kerber R.E., et al., "Electrocardiographic Indications of Atrial Puncture...needle as reported in Goldberg B.B., et al., "Ultrasonically Guided Pericardiocentesis," in Amer. J.

**Cardiol** ., 31:490 (1973).

However, there are complications associated with needle pericardiocentesis. These complications include laceration the epicardial surface of the **heart** . While creating a bleb by suction through a side wall port combined with a tangential...

...the pericardium at a desired location may be difficult due to the motion of the **heart** during normal **cardiac** contraction relative to the orientation of the axial dimension of the a device.

Accordingly, there...

...a device and method for safe access to the pericardial space without injury to the **heart** , in order to aspirate fluids directly from or to directly deliver fluids, i.e., therapeutic drugs, to the **heart** muscle or associated vasculature. With such safe access to the **heart** , complications from contacting the **heart** muscle are greatly reduced and nearly eliminated. Additionally, by directly delivering drugs to the **heart** muscle via the pericardium (pericardial sac), side affects associated with drug delivery by conventional administration...guide tube 14 to form a bleb 40 of parietal pericardium 41 which surrounds the **heart** 42. As used herein, a "bleb" refers to the pericardial tissue which is drawn into...passage of the guide tube is made in the thoracic wall, for example in the **subxiphoid** region, using known methods. A second incision can be made for insertion of an **endoscope** into the thoracic cavity for 1 5 visualization of the access procedure. Alternatively, the access...

...the aid of known external visualization systems, including, for example, fluoroscopy, ultrasound, etc. In a **subxiphoid** approach the device of the invention is advanced percutaneously through the first incision over the...

...mediastinal space until the distal end of the device contacts the pericardial surface of the **heart** . The device is aligned at a desired location on the pericardial surface of the **heart** and suction is applied to the guide tube lumen to form a bleb of pericardial...the invention can be advanced through the skin incision to the pericardial surface of the **heart** for accessing the pericardial space. Alternatively, an introducer or cannula can be passed through the...

00482433      \*\*Image available\*\*

**DIRECT PERICARDIAL ACCESS DEVICE WITH DEFLECTING MECHANISM AND METHOD**  
**DISPOSITIF A ACCES PERICARDIQUE DIRECT ET MECANISME DE DEVIATION ET PROCEDE**  
**D'UTILISATION**

Patent Applicant/Assignee:

COMEDICUS INCORPORATED,

Inventor(s):

SCHMIDT Cecil C,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9913785 A1 19990325

Application: WO 98US19591 19980918 (PCT/WO US9819591)

Priority Application: US 97934045 19970919

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FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD

MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ

VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH

CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW

ML MR NE SN TD TG

Main International Patent Class: A61B-017/34

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 5581

**English Abstract**

The invention is directed to a device (10), and method for minimally invasive access to the pericardial space of a human or animal patient. The disclosed pericardial access device (10) includes a penetrating body (12) axially mobile within the lumen (13) of a guide tube (14). The guide tube (14) includes a deflecting mechanism (40) for deflecting the distal end (35) of the penetrating body (12). In use, patient's pericardium is contacted with the distal end of the guide tube (14), and suction is applied to form a pericardial bleb. The penetrating body (12) is axially mobilized distally within the lumen of the guide tube (14) until the deflecting mechanism (40) deflects the penetrating body (12) to cause the penetrating end (35) of the penetrating body (12) to enter the bleb of pericardial tissue at an angle oblique to the longitudinal axis of the guide tube (14).

**French Abstract**

L'invention concerne un dispositif (10) et un procede pour assurer un acces invasif minimal a l'espace pericardique de l'homme ou de l'animal. Le dispositif a acces pericardique selon l'invention (10) comprend un corps penetrant (12) mobile dans le sens axial, a l'interieur de la lumiere (13) d'un tube de guidage (14). Ce tube (14) comprend un mecanisme de deviation (40) pour faire devier l'extremite distale (35) du corps penetrant (12). Lors de l'utilisation de ce dispositif, le pericarde du sujet est mis en contact avec l'extremite distale du tube de guidage (14) et une aspiration permet de former une bulle pericardique. Le corps penetrant (12) est mobile dans le sens axial, et de maniere distale, a l'interieur de la lumiere du tube de guidage (14) jusqu'a ce que le mecanisme de deviation (40) fasse devier le corps penetrant (12) pour amener l'extremite (35) de ce dernier (12) a penetrer dans la bulle de tissu pericardique, en formant un angle oblique par rapport a l'axe longitudinal du tube de guidage (14).

Fulltext Availability:

Detailed Description

**Detailed Description**

... AND METHOD

Field of the Invention

5 The present disclosure is directed to minimally invasive **cardiac** procedures. More specifically, the disclosure provides a device and

method for accurate local access to...

...the term "pericardium." The pericardium (pericardial sac) is a conical membranous sac in which the **heart** and the commencement of the great vessels are contained. Gray's Anatomy (1977 ed.) pp...

...is fluid-filled and functions to 1) prevent dilation of the chambers of the **heart**, lubricates the surfaces of the **heart**, and maintains the **heart** in a fixed geometric position. It also provides a barrier to the spread of infection...

...adjacent structures in the chest cavity and prevents surrounding tissue(s) from adhering to the **heart**. The space between the pericardium and the **heart**, known as the pericardial space, is normally small in volume and 2) includes the fluid...

...atrioventricular and interventricular grooves, but not over the ventricular surfaces. See, Shabetai R, "Pericardial and **Cardiac** Pressure," in Circulation, 77:1 (1988).

Pericardiocentesis, or puncture of the pericardium, heretofore has 25...

...study of the pericardial fluid; 2) withdrawal of pericardial fluid for the treatment of acute **cardiac** tamponade; and 3) infusion of therapeutic agents for the treatment of malignant effusion or tumors...

...or fibrinolytic agents such as streptokinase.

Intrapericardial drug delivery has not been clinically utilized for **heart**-specific treatments where pericardial pathology is normal, because the pericardial space is normally small and very difficult to access without invasive surgery or risk of **cardiac** injury by standard needle pericardiocentesis techniques.

Normally, pericardiocentesis procedures are carried out by highly specialized, personnel in the **cardiac** catheterization laboratory of medical facilities, assisted by fluoroscopy and electrocardiogram monitoring equipment. Electrocardiographic monitoring of...

...264:711 (1961); Gotsman M.S., et al. "A Pericardiocentesis Electrode Needle," in Br. **Heart** J., 28:566 (1966); and Kerber R.E., et al., "Electrocardiographic Indications of Atrial Puncture...needle as reported in Goldberg B.B., et al., "Ultrasonically Guided Pericardiocentesis," in Amer. J. **Cardiol**., 31:490 (1973).

However, there are complications associated with needle pericardiocentesis. These complications include...travel that penetrates the bleb in a direction tangential to the epicardial surface of the **heart**. While creating a bleb by suction through a side wall port combined with a tangential...

...pericardium at a desired location may be difficult due to the motion 20 of the **heart** during normal **cardiac** contraction relative to the orientation of the axial dimension of the device.

Accordingly, there is...

...provides a device and method for access to the pericardial space without injury to the **heart**, in order to aspirate fluids directly from 30 or to directly deliver fluids, i.e., therapeutic drugs, to the **heart** muscle or associated vasculature. With such safe access to the **heart**, complications from contacting the **heart** muscle are greatly reduced and nearly eliminated. Additionally, by directly delivering drugs to the **heart** muscle via the pericardium (pericardial sac), side effects associated with drug delivery by conventional administration...for passage of guide tube is made in the thoracic wall, for example in the **subxiphoid** region, using known methods. A second

incision can 10 be made for insertion of an **endoscope** into the thoracic cavity for visualization of the access procedure. Alternatively, the access procedure can...

...with the aid of known external visualization systems such as fluoroscopy, ultrasound, etc. In a **subxiphoid** approach, for example, the device is advanced percutaneously through the first incision over the diaphragm...

...space until the distal end of 15 the device contacts the pericardial surface of the **heart**. The device is aligned at a desired location on the pericardial surface of the **heart** and suction is applied to the guide tube lumen to form a bleb of pericardial...

...invention can be freely advanced through the skin incision to the pericardial surface of the **heart** for 30 accessing the pericardial space. Alternatively, an introducer or cannula can be passed through...

9/5,K/9 (Item 9 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00434024 \*\*Image available\*\*

**TREATMENT METHOD VIA THE PERICARDIAL SPACE**

**PROCEDE DE TRAITEMENT VIA L'ESPACE PERICARDIQUE**

Patent Applicant/Assignee:

COMEDICUS INCORPORATED,

Inventor(s):

SCHMIDT Cecil C,

KLONER Robert A,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9824488 A2 19980611

Application: WO 97US22224 19971205 (PCT/WO US9722224)

Priority Application: US 96762379 19961206

Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES

FI GB GE GH HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK

MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU

ZW GH KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES

FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD

TG

Main International Patent Class: A61B-019/00

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 4474

English Abstract

A method for treating the **heart** (26) and associated vessels and tissues by controlling the temperature of the pericardial space (34) and/or introducing therapeutic agents thereto includes providing a fluid, liquid, gas or mixtures thereof with or without therapeutic agents, and heating and/or cooling this fluid (110). At a time proximate to the heating and/or cooling of the fluid, the pericardial space is accessed by pericardial centesis (100), such that the pericardium (24) is punctured, the pericardial space (34) is instrumented at a location, and in particular a location where treatment is desired. The heated and/or cooled fluid is then delivered to the pericardial space (34). At a time after delivery, the fluid is withdrawn from the pericardium (24) through the same instrument (104), or through another instrument a different point along the pericardium (24) that was also instrumented by standard pericardial centesis procedures. This delivery and withdrawal of the fluid (110) may be coordinated so as to form a circuit.

French Abstract

L'invention concerne un procede de traitement du coeur et des vaisseaux

et tissus associes, par regulation de la temperature de l'espace pericardique et/ou introduction dans celui-ci d'agents therapeutiques, de medicaments ou analogues. Ce procede consiste a introduire un fluide, un (des) liquide(s), un (des) gaz ou des melanges de ceux-ci, avec ou sans agents therapeutiques, medicaments ou analogues, puis a chauffer/et ou refroidir ce fluide. Au moment de proceder au chauffage et/ou refroidissement du fluide, on accede a l'espace pericardique par une pericardiocentese, de facon a penetrer dans le pericarde et a appareiller l'espace pericardique au niveau d'un emplacement et notamment au niveau d'un emplacement que l'on souhaite traiter, puis on introduit dans cet espace pericardique le fluide chauffe et/ou refroidi, et a un certain moment apres cet apport, on retire le fluide du pericarde, soit au moyen du meme catheter, soit au moyen d'une autre catheter situe au niveau d'un point different le long du pericarde, lequel etait egalement appareille (catheterise) au moyens de techniques classiques de pericardiocentese. On peut coordonner cet apport et retrait de fluide, de facon a former un circuit.

Fulltext Availability:

Detailed Description  
Claims

English Abstract

A method for treating the **heart** (26) and associated vessels and tissues by controlling the temperature of the pericardial space (34...

Detailed Description

... THE PERICARDIAL SPACE

FIELD OF THE INVENTION

The present invention is directed to treating the **heart** muscle and associated coronary vessels by controlling the temperature of the pericardial space.

More particularly...

...invention includes accessing the pericardial space by puncturing the pericardium (pericardial sac) without injuring the **heart** and associated coronary vessels, delivering and withdrawing the heated and/or cooled fluids for controlling...

...created the term 44 pericardium." The pericardiurn is a conical membranous sac in which the **heart** and 1 5 the commencement of the great vessels are contained. Gray's Anatomy (1...

...The pericardium is fluid-filled and futictions to prevent dilatation of the chambers of the **heart** , lubricates the surfaces of the **heart** , and maintains the **heart** in a fixed geometric position. It also provides a barrier to the spread of infection...

...adjacent structures in the chest cavity and prevents surrounding tissue(s) from adhering to the **heart** . The space between the pericardium and the **heart** , known as the pericardial space, is normally small in volume and the fluid film within it is too thin to functionally separate the **heart** and the pericardium. It has been observed that when fluid is injected into the pericardial...

...atrioventricular and interventricular grooves, but not over the ventricular surfaces. See, Shabetai R., "Pericardial and **Cardiac** Pressure", Circulation, 77:1 (1988).

Pericardiocentesis, or puncture of the pericardium, heretofore has been perfon...

...study of the pericardial fluid; 2) withdrawal of pericardial fluid for the treatment of acute **cardiac** tamponade; and 3) infusion of therapeutic agents for the treatment of malignant 3 0 effusion...

...such as tetracycline, bleyomycin and streptokinase.



Intrapericardial drug delivery has not been clinically utilized for **heart** -specific treatments where pericardial pathology is normal, because the pericardial space is normally small and very difficult to access without invasive surgery or risk of **cardiac** injury by standard needle pericardiocentesis techniques.

Normally, pericardiocentesis procedures are carried out by highly specialized, experienced personnel in the **cardiac** catheterization laboratory of medical facilities, assisted by fluoroscopy and electrocardiogram monitoring equipment.

Electrocardiographic monitoring of...Medicine, 264:711 (1961); Gotsman M.S., et al. "A Pericardiocentesis Electrode Needle", in Br. **Heart** J., 28:566 (1966); and Kerber R.E., et al., "Electrocardiographic Indications of Atrial Puncture...

...needle, as reported in Goldberg B.B., et al., "Ultrasonically Guided Pericardiocentesis", in Amer. J. **Cardiol** ., 31:490 (1973).

However, there are complications associated with needle pericardiocentesis. These complications include laceration...  
...efficiently delivering therapeutic agents, drugs or the like, to the pericardial space for treating the **heart** and associated vessels and tissues and for thermally shocking or heating the **heart** without the contemporaneous delivery of drugs. This agent delivery approach, directly into the pericardial space...it is preferred to perform this pericardiocentesis procedure, to access the pericardial space of the **heart** , using an instrument available under the name PerDUCERTm pericardial access device, available from Comedicus Incorporated...

...are also permissible to access the pericardial space.

As shown in FIG. 1, a small **subxiphoid** incision 10 is made in the skin into the chest cavity I I of a patient. A standard Mediastinoscopy **endoscope** (not shown) is inserted into this incision for direct vision and the apparatus 20 having an end 21 with a suction dome 22 is inserted through the **endoscope** , to the pericardium 24 surrounding the **heart** 26.

Once the dome 22 of ...subsequently punctured by a retractable needle 30 having limited travel to prevent laceration of the **heart** 26. Once punctured by the needle 30, a guidewire 32 is passed through the needle...

...for controlling the temperature in the pericardial space 34 of the pericardium 24 of the **heart** 26, where only a single incision 100 (from a needle 15 puncturing the tissue...deliver warm fluid to the pericardial space 34, allowing for heat transfer to the cooler **heart** 26. Fluid withdrawal would be by suction, as the suction provided by a suction source...Oust above freezing) to 25'C, by the cooling pump, in order to cool the **heart** approximately 230C below normal body temperature, is delivered, circulated in, and ultimately withdrawn from the...

...is indicated by arrows 219. The fluid circulating in the pericardial space 34 cools the **heart** 26, in order to decrease the oxygen demand of the **heart** , and reduce **heart** attack size or possibly prevent a **heart** attack. Additionally, this might also reduce the chest pain associated with unstable angina pectoris. The...

#### Claim

A method of treating the **heart** and associated tissues comprising:  
a. accessing the pericardial space;  
b. delivering a fluid to said...

...wherein said fluid is first cooled and then heated.

14 A method of treating the **heart** and associated tissues comprising:  
a. providing a fluid;  
b. accessing the pericardial space; and  
c...

9/5,K/10 (Item 10 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00433914 \*\*Image available\*\*

**APPARATUS AND METHOD FOR ACCESSING THE PERICARDIAL SPACE**

**APPAREIL PERMETTANT D'ACCEDER A L'ESPACE PERICARDIQUE ET TECHNIQUE  
CORRESPONDANTE**

Patent Applicant/Assignee:

COMEDICUS INCORPORATED,

Inventor(s):

GRABEK James R,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9824378 A1 19980611

Application: WO 97US22129 19971205 (PCT/WO US9722129)

Priority Application: US 96761189 19961205

Designated States: AL AM AT AT AU AZ BA BB BG BR BY CA CH CN CU CZ CZ DE DE  
DK DK EE EE ES FI FI GB GE GH HU ID IL IS JP KE KG KP KR KZ LC LK LR LS  
LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SK SL TJ TM  
TR TT UA UG UZ VN YU ZW GH KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ  
TM AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM  
GA GN ML MR NE SN TD TG

Main International Patent Class: A61B-017/28

International Patent Class: A61B-17:34

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 4318

**English Abstract**

There is provided an apparatus and a method of using the apparatus for creating a bleb of tissue of the pericardium of the **heart**, for accessing the pericardial space, intermediate the pericardium and the **heart**, and withdrawing fluid therefrom or delivering fluid, including drugs, therapeutic agents, or the like, thereto. The apparatus of the present invention includes a shaft with a first distal end and a second proximal end. A bore extends through the shaft from the distal end to the proximal end. The first end includes jaws, that open and close, as at least one of the jaws is movable. The second end includes a handle, at least a portion of the handle in communication with a mechanism in communication with the movable jaw, such that upon movement of at least a portion of the handle, the jaws can be opened and closed continuously. A needle, for puncturing the bleb of tissue grasped within the jaws, is movably mounted within the bore and is in communication with a mechanism for limiting its travel with respect to the bore.

**French Abstract**

L'invention a trait a un appareil, ainsi qu'a la technique correspondante, permettant de former une boursoufflure dans le tissu pericardique et ce, afin d'accéder a l'espace pericardique, intermediaire entre le pericarde et le coeur, pour retirer ou introduire un fluide, des medicaments, des agents therapeutiques ou analogue. L'appareil de l'invention comporte une tige ayant une extremite distale et une seconde extremite proximale, qu'un alesage traverse, de l'extremite distale a l'extremite proximale. La premiere extremite est pourvue de machoires, s'ouvrant et se fermant, l'une d'elles au moins etant mobile. La seconde extremite est pourvue d'un organe de commande, dont un element au moins est en communication avec la machoire mobile, de telle sorte que le mouvement d'au moins un element de l'organe de commande fait que les machoires s'ouvrent et se ferment sans interruption. Une aiguille, destinee a perforer la boursoufflure de tissu prise dans les machoires,

Pericardiocentesis", in Amer. J. Cardiol ., 31:490 (1973).

However, there are complications associated with needle pericardiocentesis. These complications include laceration...

...example, to aspirate fluids from or deliver therapeutic drugs to the pericardium, pericardial space or heart muscle, via the bleb.

#### SUMMARY OF THE INVENTION

1 5 The present invention provides an...

...The present invention allows for safe access to the pericardial space without injury to the heart , in order to aspirate fluids directly from or to directly deliver fluids, i.e., therapeutic drugs, to the heart muscle. With such safe access to the heart , complications from contacting the heart muscle are greatly reduced and nearly eliminated. Additionally, by directly delivering drugs to the heart muscle via the pericardium. (pericardial sac), side affects associated with drug delivery by conventional administration...accessing the pericardium I 00, and entering the pericardial space 1 0 1 surrounding the heart 102. Initially, a subxiphoid incision is made in the chest cavity of a patient. A standard mediastinoscopy endoscope is inserted into this incision for direct vision and the apparatus 20 of the present invention is inserted through the endoscope . Once at a point proximate the tissue of I 0 the pericardium I 00, such...can move the apparatus 20 holding the bleb 104, in a direction away from the heart 102, to increase the size of the bleb 104. The operator activates the needle trigger...

...has safely entered the pericardial space 101 within the bleb 104 safely, without puncturing the heart 102. Upon puncture, the guidewire 82 is advanced through the needle 38 into the pericardial...

...In the case of fluid delivery, there is provided a direct route for treating the heart 102 and associated coronary vessels 1 12. While embodiments of the present invention have been...

#### Claim

... method of claim 12 additionally comprising:

pulling said apparatus a predetermined distance away from the heart .

16 A method for accessing the space between the pericardium and the heart , comprising:

1 0 a) providing a pericardial access device including at least two jaws movable:...

...device;

1 5 c) mechanically pulling said grasped portion of the pericardium away from

the heart to form a bled of pericardium tissue adjacent said jaws;

d) inserting a needle through...

...into said bleb, and limiting the travel of the needle to prevent laceration of the heart ;

and

e) introducing a guidewire, through the needle into said bleb and into said pericardial...

9/5,K/11 (Item 11 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00371813 \*\*Image available\*\*

DEVICES FOR PERFORMING VASCULAR ANASTOMOSES

DISPOSITIFS DE REALISATION D'ANASTOMOSES VASCULAIRES

Patent Applicant/Assignee:

CEDARS-SINAI MEDICAL CENTER,

Inventor(s):

POPOV Alexander,  
BARATH Peter,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9712555 A2 19970410

Application: WO 96US15926 19961003 (PCT/WO US9615926)

Priority Application: US 95575 19951003; US 96190 19960829

Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES

FI GB GE HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW

MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG UZ VN KE LS MW SD

SZ UG AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI FR GB GR IE IT LU

MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

Main International Patent Class: A61B-017/11

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 14014

English Abstract

A method and devices are provided for performing end-to-side anastomoses between the severed end of a first hollow organ and the side-wall of a second hollow organ utilizing transluminal approach with endoscopic assistance, wherein the first and second hollow organs can be secured utilizing a biocompatible glue, clips or by suturing. In an alternative embodiment, the method utilizes a modified cutter catheter which is introduced into the first hollow organ in combination with a receiver catheter which is introduced into the second hollow organ. The distal end of the receiver catheter includes a receiver cavity and a selectively activatable magnetic material. The magnetic material is selected so that it will interact with a magnetically susceptible material disposed in the distal end of the modified cutter catheter when the modified cutter catheter is disposed in proximity to the proposed site for anastomosis whereby the severed end of the first hollow organ is matingly engaged with the side-wall of the second hollow organ. Thereafter, the severed end of the first hollow organ can be attached in sealing engagement with the side-wall utilizing clips, a biocompatible glue, or other suitable methods. The cutter is then activated to remove a portion of the side-wall of the second hollow organ, thereby creating an opening within the region of securement and establishing the anastomosis. These methods and devices find particular utility in coronary bypass surgery, including, in particular, where the first hollow organ is the left internal mammary artery (LIMA) and the second hollow organ is the left anterior descending coronary artery (LAD).

French Abstract

La presente invention concerne un procede et des dispositifs pour la realisation d'anastomoses termino-laterales entre l'extremite sectionnee d'un premier organe creux et les parois laterales d'un second organe creux par une approche transluminale sous assistance endoscopique, le premier et le second des organes creux pouvant etre fixes grace a une colle biocompatible, des pinces ou une suture. Selon une autre realisation, le procede met en oeuvre un catheter a scalpel modifie, qui est introduit dans le premier organe creux, en relation avec un catheter recepteur, qui est introduit dans le second organe creux. L'extremite distale du catheter recepteur inclut une cavite de reception et un materiau magnetique activable de facon selective. Le materiau magnetique est choisi de facon qu'il puisse creer une interaction avec un materiau a susceptibilite magnetique dispose dans l'extremite distale du catheter a scalpel modifie lorsque ce dernier est dispose a proximite du site prevu pour l'anastomose, faisant que l'extremite sectionnee du premier organe creux vienne en contact exact avec la paroi laterale du second organe creux. Il est ensuite possible de fixer de facon occlusive l'extremite sectionnee du premier organe creux contre la paroi grace a des pinces, une colle biocompatible ou d'autres procedes adequats. L'action du scalpel sert alors a eliminer une partie de la paroi laterale du second organe creux, creant ainsi une ouverture dans le region de fixation et etablissant l'anastomose. Ces procedes et dispositifs conviennent

particulierement dans le cas des pontages coronariens, y compris notamment lorsque le premier organe creux est l'artere thoracique interne gauche et que le second organe creux est l'artere interventriculaire anterieure gauche.

Fulltext Availability:  
Detailed Description

#### Detailed Description

... context of coronary artery disease, the flow of oxygenated blood to the myocardium of the **heart** is inhibited by a stenosis or obstruction in the coronary artery. This flow can be...cutting and peeling back various layers of tissue in order to give access to the **heart** and arterial sources. As a result, these operations typically require large numbers of sutures or...used to directly visualize the thoracic cavity and obtain a left lateral view of the **heart** 18.

Based upon (a) direct visualization using the **endoscopic** telescope; (b) the location of the arterial source (in this case, the LIMA 10) , the **heart** 18 and the coronary artery (in this case, the LAD 12) ; and (c) the anatomy...

...and into the thoracic cavity, and the third trocar and trocar port 22 through the **subxyphoid** space. Additional trocars or other instruments can be inserted as necessary. Often, it will be...establish the anastomosis, it is contemplated that the procedure can be performed on the beating **heart** .

In an alternative embodiment shown in FIGS. 10-11, the LIMA 10 and LAD 12...

...S., Inc. of New York and a gelatin-resorcine-formyl biological glue distributed by Laboratories **Cardial** .

As discussed in connection with the clipping devices shown in FIGS. 8-9, the distal...

...establish the anastomosis expeditiously, and, therefore, that the procedure can be performed on the beating **heart** .

Where the anastomosis is to be performed on the beating **heart** , it is advantageous to slow the **heart** to 30 40 beats per minute by the intravenous administration of beta blockers. This slowing of the **heart** will facilitate securement of the LIMA to the LAD without the necessity of inducing **cardiac** arrest. Even where it is contemplated that the procedure will be performed on the beating **heart** , prophylactic measures should be taken so that femoral to femoral **cardiopulmonary** bypass can be initiated if necessary. Where the method is to be applied to surgery on an arrested **heart** , preparations should be made for femoral to femoral **cardiopulmonary** bypass.

Once the anastomosis is established, the ligature around the cutter catheter 14 is released...establish the anastomosis, it is contemplated that the procedure can be performed on the beating **heart** .

Although a particular form of the invention has been illustrated and described, it will be...

Set	Items	Description
S1	89	SUB() (XIPHOID? OR XYPHOID?) OR SUBXIPHOID? OR SUBXYPHOID? - OR (INFERIOR OR BELOW) (2N) (XIPHOID? OR XYPHOID?)
S2	8058	ENDOSCOP?
S3	72536	HEART OR CARDIO? OR CARDIA?
S4	79	S1 AND S3
S5	23	S4 AND S2
S6	12	S1(S)S2
S7	11	S6 AND S3
S8	11	IDPAT (sorted in duplicate/non-duplicate order)
S9	11	IDPAT (primary/non-duplicate records only)

?show files

File 348:EUROPEAN PATENTS 1978-2002/Nov W03

(c) 2002 European Patent Office

File 349:PCT FULLTEXT 1979-2002/UB=20021121,UT=20021114

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6/5/1 (Item 1 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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08716884 BIOSIS NO.: 199395006235

**Malignant pericardial effusions: Usefulness of pericardioscopy.**

AUTHOR: Millaire Alain(a); Wurtz Alain; De Groote Pascal; Saudemont Alain;  
Chambon Alain; Ducloux Gerard

AUTHOR ADDRESS: (a)Serv. de Cardiol. C, Hopital Cardiol., CHR, 59037 Lille  
Cedex\*\*France

JOURNAL: American Heart Journal 124 (4):p1030-1034 1992

ISSN: 0002-8703

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

**ABSTRACT:** In cases of malignant pericardial effusion, surgical **subxiphoid** biopsy sometimes fails to prove malignancy. To assess the usefulness of pericardioscopy, which allows an **endoscopic** investigation of the pericardial cavity, this technique was systematically performed during surgical drainage procedures that were performed on 40 patients who had pericardial effusions of suspected malignant origin. Twenty-six patients had a history of neoplasm, 10 had a history of hematologic malignancy, and four had recent tumors or lymphadenopathies that were suspected to be of malignant origin. Classical tests that are usually performed during a conventional surgical drainage procedure (fluid studies and **subxiphoid** biopsy) were combined with direct visualization of the pericardial surfaces and guided biopsies of suspicious areas. The follow-up period after pericardioscopy was at least 12 months. Two early deaths occurred after pericardioscopy, but no death was directly related to the **endoscopy**. According to all of the tests that were performed, diagnoses were malignant pericardial effusion in 15 of 40 patients (group I, 37%) and nonmalignant pericardial effusion in 25 of 40 patients (group II, 73%). In 3 of 13 patients (23%) in group I, the diagnosis was obtained only by pericardioscopy (results of cytologic studies and **subxiphoid** biopsy were negative). In two patients in group I, pericardioscopy could not be completed, but the diagnosis of malignant pericardial effusion was obtained by pericardiocentesis. In group II, effusion was considered to the postradiation pericarditis in five cases, infectious pericarditis in three cases (bacterial in one and tuberculous in two), hemopericardium induced by coagulation disturbances in three cases, and idiopathic pericarditis in 14 cases. Mid-and long-term follow-up (mean duration, 35 months; range, 12 to 72 months) showed that in group I the median survival time was 42 days, whereas in group II it was 1 year. The difference between the two life curves was significant ( $p < 0.05$ ). Thus pericardioscopy appears to be a technique that does not increase the risk of the surgical drainage procedure. Its main benefit is a greater diagnostic sensitivity as a result of direct visualization of the pericardial surfaces and guided biopsies. It should be available at the time that the surgical drainage procedure is performed, since the diagnosis of malignant pericardial effusion has significant prognostic consequences.

**DESCRIPTORS:**

**MAJOR CONCEPTS:** Cardiovascular Medicine (Human Medicine, Medical Sciences); Oncology (Human Medicine, Medical Sciences); Pathology; Surgery (Medical Sciences)

**BIOSYSTEMATIC NAMES:** Hominidae--Primates, Mammalia, Vertebrata, Chordata, Animalia

**ORGANISMS:** human (Hominidae)

**BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA):** animals; chordates; humans; mammals; primates; vertebrates

**MISCELLANEOUS TERMS:** DIAGNOSIS; PATHOLOGY; SURGICAL DRAINAGE PROCEDURE; SURGICAL **SUBXIPHOID** BIOPSY

**CONCEPT CODES:**

11105 Anatomy and Histology, General and Comparative-Surgery

12504 Pathology, General and Miscellaneous-Diagnostic

14506 Cardiovascular System-Heart Pathology  
24001 Neoplasms and Neoplastic Agents-Diagnostic Methods  
12512 Pathology, General and Miscellaneous-Therapy (1971- )  
BIOSYSTEMATIC CODES:  
86215 Hominidae

6/5/2 (Item 2 from file: 5)  
DIALOG(R) File 5:Biosis Previews(R)  
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08224450 BIOSIS NO.: 000094025414

**PERICARDIOSCOPY A NEW WINDOW TO THE HEART IN INFLAMMATORY CARDIAC DISEASES**

AUTHOR: MAISCH B; DRUDE L

AUTHOR ADDRESS: ABT. FUER INNERE MED., SCHWERPUNKT KARDIOL. UNIVERSITAET, BALDINGER STRASSE, D-3550 MARBURG.

JOURNAL: HERZ 17 (2). 1992. 71-78. 1992

FULL JOURNAL NAME: Herz

CODEN: HERZD

RECORD TYPE: Abstract

LANGUAGE: GERMAN

**ABSTRACT:** Pericardioscopy is a new diagnostic tool to visualize macroscopically alterations of both the epicardium and pericardium. For the first time the macropathology of the epicarditis and pericarditis can be observed in vivo by the **cardiologist** in viral, bacterial, uremic and autoimmune **cardiac** processes. It enables us also to get an insight into neoplastic and metastatic processes affecting the **heart** and the pericardium. The prerequisite is the documentation of a larger pericardial (> 150 ml by the cubic model) effusion with an echocardiographically documented effusion of type C, which must have at least 5 mm separation of the epicardial and pericardial layer in diastole at the anterior side of the **heart** when echocardiographic imaging is performed from the **subxyphoidal** or third intercostal space. The first experience in 30 patients is reported. After puncture of the pericardial effusion a 9E sheath was introduced by use of a guide wire under echocardiographic and/or x-ray control. The fluid was removed by aspiration and 100 to 150 ml of body warm saline were infused in the pericardial sack. A flexible 8F fiberglass instrument (Vantec, Baxter or Storz) and a rigid 110.degree. 8F **endoscope** (Storz) were used for visualization of peri- and epicardium and for video documentation. After **endoscopic** inspection of the macropathology fibrinous strands or increased vascular injection can be observed in viral, autoimmune or idiopathic pericarditis or perimyocarditis. In the latter three forms of pericardial effusion only inflammatory cells can be observed when the pericardial fluid is analyzed. Complementary to visualization, optically-guided and controlled epicardial and pericardial biopsies were performed and analyzed further. The demonstration of a lymphocytic infiltrate in the epicardial biopsy is diagnostic of myocardial involvement in the inflammatory pericardial process. IgG, IgA, IgM- and/or complement fixation can also be demonstrated in the epicardial or pericardial biopsies. The corresponding presence of antimembrane or antisarcolemmal or antimyolemmal antibodies in the pericardial fluid is of diagnostic relevance and may indicate secretion of these antibodies by plasma- or B-cells in the **heart** or in the pericardial effusion, particularly when they are of much higher titer than in the peripheral blood. Specific diagnosis of pericardial effusion is thus greatly facilitated by the triad, pericardioscopy, cytology and epicardial as well as pericardial biopsy.

DESCRIPTORS: HUMAN PERICARDITIS PERICARDIAL EFFUSION DIAGNOSTIC METHOD  
MEDICAL METHOD METHOD APPLIED

CONCEPT CODES:

11106 Anatomy and Histology, General and Comparative-Radiologic Anatomy  
12504 Pathology, General and Miscellaneous-Diagnostic  
12508 Pathology, General and Miscellaneous-Inflammation and  
Inflammatory Disease



14501 Cardiovascular System-General; Methods  
14506 Cardiovascular System-Heart Pathology  
18200 Coelomic Membranes; Mesenteries and Related Structures (1970- )  
10504 Biophysics-General Biophysical Techniques

BIOSYSTEMATIC CODES:

86215 Hominidae

BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA):

Animals  
Chordates  
Vertebrates  
Mammals  
Primates  
Humans

6/5/3 (Item 3 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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00611199 BIOSIS NO.: 000007061164

**A NEW TYPE OF HEART ELECTRODE FOR IMPLANTATION BY SUBXIPHOIDIAN  
ENDOSCOPY**

AUTHOR: MORIN P; DESPRES J; BENICHON J; ROY P; BEAULIEU M

JOURNAL: UNION MED CAN 100 (4). 1971 787 1971

CODEN: UMCNA

DOCUMENT TYPE: Meeting

RECORD TYPE: Citation

DESCRIPTORS: ABSTRACT HUMAN GERIATRICS

CONCEPT CODES:

10511 Biophysics-Bioengineering  
12512 Pathology, General and Miscellaneous-Therapy (1971- )  
14501 Cardiovascular System-General; Methods  
24500 Gerontology

BIOSYSTEMATIC CODES:

86215 Hominidae

BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA):

Animals  
Chordates  
Vertebrates  
Mammals  
Primates  
Humans

6/5/4 (Item 1 from file: 73)

DIALOG(R)File 73:EMBASE

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07855768 EMBASE No: 1999329096

**Pericardoscopy for primary management of pericardial effusion in cancer  
patients**

Porte H.L.; Janecki-Delebecq T.J.; Finzi L.; Metois D.G.; Millaire A.;  
Wurtz A.J.

H.L. Porte, Clinique Chirurgicale, Hopital Calmette, Bd. du Pr J.

Leclercq, 59037 Lille Cedex France

European Journal of Cardio-thoracic Surgery ( EUR. J. CARDIO-THORAC.

SURG. ) (Netherlands) 1999, 16/3 (287-291)

CODEN: EJCSE ISSN: 1010-7940

PUBLISHER ITEM IDENTIFIER: S1010794099002043

DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 25

Objective: To assess the usefulness of pericardoscopy via the **subxyphoid** route for the diagnosis and treatment of pericardial effusion in patients with a history of cancer. Methods: All patients with a recent or remote history of cancer and a pericardial effusion of unknown origin requiring drainage for diagnostic and therapeutic purposes were included in the

study. They underwent complete exploration and cleansing of the pericardial cavity. Abnormal structures or deposits were biopsied under direct visual control, with a 24 cm long rigid pericardoscope. Results: Between 1985 and 1998, pericardioscopy was completed in 112 of the 114 patients included (feasibility 98 %), resulting in the immediate relief of symptoms in all the cases. Peri-operative mortality was 3.5%, and post-operative morbidity, 6.1%. After pericardioscopy pericardial effusions were considered malignant in 43 cases. One more case (2.3%) due to a false negative result of pericardioscopy was diagnosed during follow-up. Overall, 44 of the 114 patients (38.6%) had a malignant effusion, and 70 (61.4%), a non-malignant effusion according to the follow up. In 10 of the 44 patients with a malignant pericardial effusion (22.7%), pericardioscopy corrected the results of cytological pericardial fluid studies and pericardial window biopsy, both false negatives. The sensitivities of cytological studies of the pericardial fluid, pathological examinations of pericardial window biopsy and pericardioscopy were 75, 65 and 97%, respectively. One patient with a malignant effusion had a non-symptomatic recurrence 1 month after pericardioscopy (2.3%). Conclusion: We recommend pericardioscopy to ascertain the malignant nature of the effusion and to diminish the recurrence rate, this avoiding repeat procedures in patients with a short life expectancy. Copyright (C) 1999 Elsevier Science B.V.

**MEDICAL DESCRIPTORS:**

\*pericardial effusion--surgery--su; \*pericardial effusion--diagnosis--di; \*  
**endoscopy**

malignant neoplastic disease--surgery--su; malignant neoplastic disease  
--diagnosis--di; surgical drainage; lung cancer; nonhodgkin lymphoma;  
biopsy; surgical mortality; morbidity; pericardiotomy; recurrent cancer  
--prevention--pc; pathology; surgical technique; mortality; human; major  
clinical study; article; priority journal

**MEDICAL TERMS (UNCONTROLLED):** pericardioscopy

**SECTION HEADINGS:**

016 Cancer

018 **Cardiovascular Diseases and Cardiovascular Surgery**

005 General Pathology and Pathological Anatomy

009 Surgery

6/5/5 (Item 2 from file: 73)

DIALOG(R)File 73:EMBASE

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06629501 EMBASE No: 1996294306

**Pericardioscopy in the etiologic diagnosis of pericardial effusion in 141 consecutive patients**

Nugue O.; Millaire A.; Porte H.; de Groote P.; Guimier P.; Wurtz A.;  
Ducloux G.

SCHC, Ctr. Hospitalier Reg. Universitaire, 59037 Lille Cedex France  
Circulation ( CIRCULATION ) (United States) 1996, 94/7 (1635-1641)

CODEN: CIRCA ISSN: 0009-7322

DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

Background: Although previous small series have documented the utility of pericardioscopy for accurate etiologic diagnosis of pericardial effusion, this technique remains underused. The aim of our study was to assess the benefits and risks of surgical pericardioscopy in a large prospective series. Methods and Results: One hundred forty one consecutive patients with unexplained pericardial effusion underwent 142 pericardioscopies with a rigid mediastinoscope. For each patient, the etiologic data obtained by pericardioscopy (visualization of pericardium, guided biopsies, **subxiphoid** window biopsy, and fluid analysis) were compared with the results that would have been obtained with only conventional surgical drainage and biopsy ( **subxiphoid** window biopsy and fluid analysis). After complete workup, a specific cause was found in 69 cases (48.6%): the other 73 cases were considered idiopathic effusions (51.4%). Procedural and in-hospital mortality was 8 of 141 patients (5.6%). No death was directly attributable to pericardioscopy. During long-term follow-up (median duration, 24 months;

range, 6 to 96), a previously unrecognized cause was discovered in 6 patients (4%). By comparing the areas under the receiver-operating characteristic curves, the diagnostic advantage of pericardioscopy was significant for the whole series (pericardioscopy, 0.98+/-0.011; conventional surgical drainage, 0.89+/-0.029; P<.001). The increase in sensitivity was more marked for some types such as neoplastic (21%), radiation-induced (100%), or purulent (83%) effusions. Conclusions: Our data demonstrate that pericardioscopy increases the diagnostic sensitivity of surgical pericardial drainage and biopsy without specific risk.

MEDICAL DESCRIPTORS:

\* **endoscopy** ; \*pericardial effusion--complication--co; \*pericardial effusion--etiology--et; \*pericardial effusion--diagnosis--di adult; aged; article; clinical trial; diagnostic accuracy; diagnostic value ; female; human; major clinical study; male; mortality; priority journal; pus--complication--co; radiation injury--complication--co; safety

MEDICAL TERMS (UNCONTROLLED): pericardioscopy

SECTION HEADINGS:

018 **Cardiovascular Diseases and Cardiovascular Surgery**

6/5/6 (Item 3 from file: 73)

DIALOG(R)File 73:EMBASE

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06425507 EMBASE No: 1996074267

**Videosurgery of pericardial effusion: Technique and results**

VIDEO-CHIRURGIE DES EPANCHEMENTS PERICARDIQUES. TECHNIQUE ET RESULTATS

Nataf P.; Jault F.; Pouzet B.; Dorent R.; Lima L.; Vaissier E.; Benarim S.; Levasseur J.P.; Delcourt A.; Pavie A.; Gandjbakhch I.

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Archives des Maladies du Coeur et des Vaisseaux ( ARCH. MAL. COEUR VAISS. ) (France) 1996, 89/2 (223-228)

CODEN: AMCVA ISSN: 0003-9683

DOCUMENT TYPE: Journal; Article

LANGUAGE: FRENCH SUMMARY LANGUAGE: FRENCH; ENGLISH

Videosurgery is a relatively non-invasive method of draining the pericardium by the creation of a pleuropericardial window. It provides an excellent view of the thoracic cavity and allows selection of pericardial and pleural, pulmonary or mediastinal biopsy sites. The authors report their preliminary results with this technique. Between May 1994 and May 1995, 22 patients with pericardial effusions were operated by videosurgery at the Pitie Hospital. None of the patients had clinical signs of tamponade. The technique consists in introducing, through 2 or 3 thoracic incisions of 15 mm, trocars allowing passage of an **endoscopic** camera and different surgical instruments. Access to the thoracic cavity enabled assessment of the pleura, evacuation of pleural effusions (n = 8) and biopsy of pleural nodules (n = 2). One pulmonary biopsy was performed. Opening the pericardium enabled evacuation of pericardial effusions averaging 622 ml. Pericardial biopsies showed appearances suggesting tuberculosis (n = 2), lupic vasculitis (n = 1) and post-radiation pericarditis (n = 1). In other cases, a histologic diagnosis of non-specific pericarditis was made. A biopsy of a pleural nodule showed undifferentiated carcinoma in one case. A pulmonary biopsy revealed the presence of relatively undifferentiated carcinoma. There were no complications related to the technique. There was one recurrence of pericardial effusion at one month in a patient with carcinoma of the lung who had previously had **subxiphoid** drainage. There were no cases of secondary pericardial constriction. Therefore, videosurgery is a relatively non-invasive and effective technique of pericardial drainage and biopsy. When there is no emergency, it is probably the method of choice in the treatment and diagnosis of pericardial effusions.

MEDICAL DESCRIPTORS:

\*pericardial effusion--diagnosis--di; \*pericardial effusion--surgery--su adult; aged; article; clinical article; controlled study; female; human;

male; methodology; surgical technique; videorecording

SECTION HEADINGS:

015 Chest Diseases, Thoracic Surgery and Tuberculosis

018 **Cardiovascular** Diseases and **Cardiovascular** Surgery

6/5/7 (Item 4 from file: 73)

DIALOG(R)File 73:EMBASE

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06176935 EMBASE No: 1995206153

**Video-assisted subxiphoid pericardiectomy**

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Cardiothoracic Unit, Department of Surgery, Prince of Wales

Hospital, Shatin, N.T. Hong Kong

Journal of Laparoendoscopic Surgery ( J. LAPAROENDOSC. SURG. ) (United States) 1995, 5/3 (193-198)

CODEN: JLSUE ISSN: 1052-3901

DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

We report a case of malignant pericardial effusion with chronic tamponade treated by video-assisted **subxiphoid** pericardiectomy in a 58-year-old female. The procedure was performed under local anesthesia through a 3.5-cm midline incision over the xiphoid process using a mediastinoscope, a 5-mm telescope connected to the video camera, and an **endoscopic** grasper and scissors. A large piece of pericardium (5 cm x 6 cm) over the right ventricle was excised. The patient obtained immediate relief and was discharged on the second postoperative day. Follow-up at 4 months showed no recurrence of effusion. Video assistance allows generous pericardiectomy, and as the rate of recurrence has been suggested to be directly related to the extent of resection, video-assisted **subxiphoid** pericardiectomy offers a theoretical advantage over the conventional approach, as more pericardium can be excised. We recommend that this technique receive further investigation.

MEDICAL DESCRIPTORS:

\*pericardial effusion--surgery--su; \*pericardial effusion--complication--co; \*pericardiectomy

adult; article; case report; clinical trial; **endoscopic** surgery; female;

**heart** tamponade--surgery--su; human; lung cancer; mediastinoscopy;

priority journal; sternum; videorecording

SECTION HEADINGS:

018 **Cardiovascular** Diseases and **Cardiovascular** Surgery

6/5/8 (Item 5 from file: 73)

DIALOG(R)File 73:EMBASE

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03109811 EMBASE No: 1986222388

**Flexible fiberoptic pericardioscopy for the diagnosis of pericardial disease**

Kondos G.T.; Rich S.; Levitsky S.

Section of Cardiology, Department of Medicine, University of Illinois, Chicago, IL 60680 United States

Journal of the American College of Cardiology ( J. AM. COLL. CARDIOL. ) (United States) 1986, 7/2 (432-434)

CODEN: JACCD

DOCUMENT TYPE: Journal

LANGUAGE: ENGLISH

Pericardiocentesis provides an etiologic diagnosis for pericardial effusions approximately 25% of the time. In 7 patients with evidence of a large pericardial effusion of unknown origin without **cardiac** tamponade, a flexible fiberoptic bronchoscope was inserted through a **subxiphoid** incision after the effusion was drained. Pericardioscopy allowed visualization of all pericardial surfaces and made it possible to perform

selective biopsy not limited to a **subxiphoid** window. It is a safe procedure that can permit distinction among benign, malignant and tuberculous origins of pericardial effusion.

MEDICAL DESCRIPTORS:

\* **endoscopy** ; \*fiberscope; \*pericardiocentesis; \*pericarditis diagnosis; **heart** ; priority journal; methodology; human; adult; clinical article

SECTION HEADINGS:

018 **Cardiovascular** Diseases and **Cardiovascular** Surgery  
027 Biophysics, Bioengineering and Medical Instrumentation

6/5/9 (Item 1 from file: 94)

DIALOG(R)File 94:JICST-EPlus

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03016218 JICST ACCESSION NUMBER: 96A0736683 FILE SEGMENT: JICST-E

**Thoracoscopic Pericardiectomy for Cardiac Tamponade.**

KANEKO KOICHI (1); KYO SHUN'EI (1); MORITA RIICHIRO (1); SUGA MASAHARU (1);

OMOTO RYOZO (1)

(1) Saitama Med. Sch.

Nippon Kyobu Rinsho(Japanese Journal of Chest Diseases), 1996, VOL.55,NO.8  
, PAGE.630-636, FIG.8, TBL.1, REF.10

JOURNAL NUMBER: Z0382BAV ISSN NO: 0385-3667

UNIVERSAL DECIMAL CLASSIFICATION: 616.12-089

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Original paper

MEDIA TYPE: Printed Publication

ABSTRACT: Four patients with recurrent **cardiac** tamponade were treated by the thoracoscopic pericardiectomy after unsuccessfully repeated **subxiphoid** pericardiocentesis. We inserted three trocars through the intercostal spaces on the anterior to lateral chest wall and excised 5\*5-cm of the pericardium anterior or posterior to the phrenic nerve, and drained the pericardial fluids into the left or right pleural cavity. Pericardial effusions were malignant in two cases due to lung cancer, and the remaining two were benign occurring after chemo-radiotherapy for esophageal cancer and thymic cancer respectively. These two original malignant diseases had completely been cured. All procedures were performed under general anesthesia with single lung ventilation using double-lumen endobronchial tube, and the patients was placed on 15-30 degree lateral oblique position. Subsequently, a single chest tube was inserted through a trocar site and kept in place for a mean duration of 2.8 days. All patients recovered within a few days without any complications and no recurrence of pericardial effusion was noted during a mean follow-up period of 16.8 months. Thoracoscopic pericardiectomy appears to be safe, minimally invasive and effective treatment for **cardiac** tamponade due to massive pericardial effusion. (author abst.)

DESCRIPTORS: **cardiac** tamponade; pericardial window technic; **endoscope** ; therapy; human(primates)

BROADER DESCRIPTORS: **heart** disease; **cardiovascular** disease; disease; **heart** surgery; thoracic surgery; operative surgery; **cardiovascular** surgery; anastomosis

CLASSIFICATION CODE(S): GJ05030X

6/5/10 (Item 1 from file: 144)

DIALOG(R)File 144:Pascal

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13831159 PASCAL No.: 99-0006833

**Video-assisted thoracoscopic pericardial fenestration for loculated or recurrent effusions**

GEISSBUEHLER K; LEISER A; FUHRER J; RIS H B

Department of Thoracic and Cardiovascular Surgery Inselspital University of Bern, Bern witzerland, Bern, Switzerland; Department of Cardiology,

Inselspital, University of Bern, Bern, Switzerland

Journal: European journal of cardio-thoracic surgery, 1998, 14 (4)  
403-408

ISSN: 1010-7940 CODEN: EJCSE7 Availability: INIST-21307;  
354000071786020100

No. of Refs.: 17 ref.

Document Type: P (Serial) ; A (Analytic)

Country of Publication: Netherlands

Language: English

Objective: The validity of video-assisted thoracoscopic pericardial fenestration was prospectively assessed for loculated effusions, effusions previously treated by percutaneous catheter manoeuvres and those with concurrent pleural diseases. Methods: Inclusion criteria consisted of echocardiographically documented pericardial effusions requiring diagnosis or relief of symptoms and recurrent effusions after failed percutaneous drainage and balloon pericardiotomy. Pre-operative CT-scan was used to delineate additional pleural pathology and to determine the side of intervention. All patients were followed clinically and by echocardiographic examination 3 months post-operatively. Results: Twenty-four patients underwent thoracoscopic pericardial fenestration with 11 patients (54%) being previously treated by percutaneous catheter drainage, balloon pericardiotomy or **subxyphoidal** fenestration. Pre-operative echocardiography revealed septation and loculation in 18 patients (72%). Additional pleural pathology was identified on CT scan in 12 patients (50%) and talc pleurodesis was performed in six patients, all suffering from malignant pleural effusion. The mean operation time was 45 min (range 30-60 min) with no complications being observed. All patients were followed 3 months post-operatively by clinical and echocardiographic examination: relief of symptoms was achieved in all patients but echocardiography showed a recurrence in one patient (4%). Another recurrence was found by echocardiography after a mean follow-up time of 33 months in the 12 patients suffering from a non-malignant pericardial effusion. No recurrence of pleural or pericardial effusion was observed in the subset of patients with talc pleurodesis. Conclusion: Video-assisted thoracoscopic pericardial fenestration is safe and effective for loculated pericardial effusions previously treated by percutaneous drainage manoeuvres and those with concomitant pleural disease.

English Descriptors: Guidance; Video technique; Human; Thoracoscopy;

Surgical window; Exploration; Pericarditis; Recurrence; Treatment;

Echocardiography; Drainage; Percutaneous route; Pleurisy; Concomitant disease; Treatment efficiency; Morbidity

Broad Descriptors: Instrumentation therapy; Surgery; **Endoscopy** ;

**Cardiovascular disease** ; **Heart** disease; Pericardial disease; Sonography ; Respiratory disease; Pleural disease; Traitement instrumental;

Chirurgie; **Endoscopie** ; Appareil circulatoire pathologie; **Cardiopathie** ; Pericarde pathologie; Exploration ultrason; Appareil respiratoire pathologie; Plevre pathologie; Tratamiento instrumental; Cirugia;

**Endoscopia** ; Aparato circulatorio patologia; **Cardiopatía** ; Pericardio patologia; Exploracion ultrasonido; Aparato respiratorio patologia;

Pleura patologia

French Descriptors: Guidage; Technique video; Homme; Thoracoscopie; Fenetre

chirurgicale; Exploration; Pericardite; Recurrence; Traitement;

Echocardiographie; Drainage; Voie percutanee; Pleuresie; Association morbide; Efficacite traitement; Morbidite

Classification Codes: 002B25E

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6/5/11 (Item 2 from file: 144)

DIALOG(R) File 144:Pascal

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12132078 PASCAL No.: 95-0364067

**Evaluation of subxiphoid pericardial window used in the detection of occult cardiac injury**

GREWAL H; IVATURY R R; DIVAKAR M; SIMON R J; ROHMAN M  
New York medical coll., dep. surgery, Bronx NY, USA  
Journal: Injury, 1995, 26 (5) 305-310  
ISSN: 0020-1383 CODEN: INJUBF Availability: INIST-15593;  
354000051120330030

No. of Refs.: 38 ref.

Document Type: P (Serial) ; A (Analytic)

Country of Publication: United Kingdom

Language: English

We critically evaluated several diagnostic modalities (clinical criteria, **subxiphoid** pericardial window (SPW) and laparoscopy) used in the detection of occult **cardiac** injury in haemodynamically stable patients at high risk of **cardiac** injury. Over 5 years, 122 patients were admitted to a Level I trauma centre with such an injury. They sustained 69 stab wounds, and 53 gunshot wounds. Sites of penetration were: precordial (81), right chest (25), lateral chest (13), thoracoabdominal (40) and abdominal (19). Vital signs in the emergency room were (mean  $\pm$  SD): systolic BP, 111  $\pm$  23.2 mmHg; HR, 106  $\pm$  18.7; GCS, 13.6  $\pm$  1.3; and CVP, 17  $\pm$  7.8 cmH SUB 2 O. SPW was performed in all patients and was positive for haemopericardium in 26 patients, 24 (92 per cent) of whom had a **cardiac** injury at operation. Two patients had pericardial lacerations without **cardiac** injury. In addition, 14 patients with lower precordial and thoracoabdominal wounds underwent laparoscopy. At laparoscopy, the pericardium was evaluated by transdiaphragmatic inspection in 10 patients. The presence (two) or absence (eight) of blood within the pericardium was accurately predicted and verified by SPW. Univariate and multiple logistic regression analysis of clinical data failed to reveal any significant predictor of **cardiac** injury. SPW remains the standard means of diagnosing occult **cardiac** injury in high-risk patients. Since the incidence of occult **cardiac** injury in haemodynamically stable patients is 20 per cent, SPW should be used liberally. Lapararoscopy may have a role in evaluating the pericardium in the subgroup of patients with lower chest wounds, and it facilitates inspection of intra-abdominal viscera and diaphragm at the same time

English Descriptors: Penetrating injury; **Heart** ; Human; Side arm; Fire arm ; Thorax; Diagnosis; Comparative study; Pericardotomy; Surgical window; Pericardium; Laparoscopy

Broad Descriptors: Trauma; **Cardiovascular** disease; **Heart** disease; **Endoscopy** ; Traumatisme; Appareil circulatoire pathologie; **Cardiopathie** ; **Endoscopie** ; Traumatismo; Aparato circulatorio patologia; **Cardiopatía** ; **Endoscopia**

French Descriptors: Plaie penetrante; Coeur; Homme; Arme blanche; Arme a feu; Thorax; Diagnostic; Etude comparative; Pericardotomie; Fenetre chirurgicale; Pericarde; Laparoscopie

Classification Codes: 002B16A

6/5/12 (Item 1 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)

11131672 21174390 PMID: 11276457

**Robotically-assisted coronary artery bypass surgery: moving toward a completely endoscopic procedure.**

Ducko C T; Stephenson E R; Sankholkar S; Damiano R J

Section of Cardiothoracic and Vascular Surgery, The Milton S. Hershey Medical Center, Penn State Geisinger Health System, Hershey, PA 17033, USA.  
heart surgery forum (United States) 1999, 2 (1) p29-37, ISSN 1098-3511 Journal Code: 100891112

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Subfile: INDEX MEDICUS

BACKGROUND: **Endoscopic** coronary artery bypass grafting (ECABG) has not been possible with traditional techniques. This report details our animal

experience determining the feasibility of using a robotically-assisted microsurgical system to perform ECABG. METHODS: Following preliminary work using a cadaveric pig **heart** model, acute and chronic animal studies were performed. Calves were placed on **cardiopulmonary** bypass after the left internal mammary artery (LIMA) was harvested. **Subxiphoid endoscopic** ports (2 instrument, 1 camera) were placed and a robotic system was used to perform ECABG between the LIMA and left anterior descending coronary artery. LIMA graft flow (LIMAQ) was measured, and excised hearts underwent angiographic and histologic analyses. RESULTS: All anastomoses were successfully completed in both the acute and chronic studies (mean time of 33.9 +/- 1.9 and 33.2 +/- 3.4 minutes, respectively). Angiographic patency was 100% in both the acute (8/8) and chronic (6/6) studies, which was confirmed by histology. In the chronic study, there was no difference in LIMAQ between intraoperative and autopsy measurements. CONCLUSIONS: This study shows that ECABG is feasible in an animal model with excellent results. The FDA has recently given approval for clinical trials of this new technology.

Tags: Animal; Female; Human; Male

Descriptors: \*Coronary Artery Bypass--instrumentation--IS; \*Robotics --instrumentation--IS; \*Thoracosopes; Cattle; Equipment Design; Myocardial Revascularization--instrumentation--IS; Surgical Instruments; Swine; User-Computer Interface

Record Date Created: 20010329

6/5/13 (Item 2 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)

09420169 97301269 PMID: 9156289

**Newer diagnostic measures and emergency management.**

Mattox K L; Wall M J

Department of Surgery, Ben Taub General Hospital, Houston, Texas, USA.

Chest surgery clinics of North America (UNITED STATES) May 1997, 7

(2) p213-26, ISSN 1052-3359 Journal Code: 9208495

Document type: Journal Article; Review; Review, Tutorial

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Subfile: INDEX MEDICUS

Evolving technology provides new diagnostic and emergency management options for the surgeon caring for patients with thoracic trauma. Abdominal ultrasound performed by surgeons in the emergency department makes pericardiocentesis and **subxiphoid** pericardiotomy obsolete. Transesophageal echocardiography supplements aortography in the diagnosis of thoracic aortic injury. New terminologies replace the overused term myocardial contusion. Pulmonary tractotomy is an innovative approach to through-and-through pulmonary penetrating injuries. Centrifugal pumps add new options to thoracic great-vessel injury management. Endovascular stented grafts will be added to the armamentarium of the thoracic surgeon for injured vessels. (66 Refs.)

Tags: Human

Descriptors: \*Thoracic Injuries--diagnosis--DI; \*Thoracic Injuries --therapy--TH; \*Wounds, Nonpenetrating--diagnosis--DI; \*Wounds, Nonpenetrating--therapy--TH; \*Wounds, Penetrating--diagnosis--DI; \*Wounds, Penetrating--therapy--TH; Diagnostic Imaging; Emergencies; **Endoscopy**; **Heart Injuries** --diagnosis--DI; **Heart Injuries**--therapy--TH; Pericardiectomy; Thoracoscopy; Thoracostomy; Thoracotomy

Record Date Created: 19970724

6/5/14 (Item 3 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)

08804517 96159656 PMID: 8574019

**Video assisted coronary bypass surgery.**

Benetti F J; Ballester C; Sani G; Doonstra P; Grandjean J

Benetti Foundation, Buenos Aires, Argentina.

Journal of cardiac surgery (UNITED STATES) Nov 1995, 10 (6) p620-5,



ISSN 0886-0440 Journal Code: 8908809

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Subfile: INDEX MEDICUS

An alternative way to revascularize coronary vessels is described, using arterial conduits without extracorporeal circulation. The **heart** is exposed via a small thoracotomy over the fifth left intercostal space. A thoracoscope is introduced into the thorax, to assist in the harvesting of the left internal mammary artery (LIMA). In selected patients with two or three vessel disease, the same procedure can be achieved on the right side, harvesting the right internal mammary artery to revascularize the right coronary artery. The gastroepiploic artery can be easily reached and used to revascularize the posterior descending artery, through a mini-subxiphoid median laparotomy. This technique was used to revascularize 30 patients from April 1994 to June 1995. All received a LIMA graft to the left anterior descending artery, and two had a free radial artery graft from the LIMA, sequentially bypassing the diagonal and obtuse marginal branches. There was neither perioperative mortality nor morbidity myocardial infarction. Fifteen patients were restudied angiographically before discharge. Average hospital stay was 43 +/- 11 hours.

Tags: Female; Human; Male

Descriptors: Coronary Artery Bypass--methods--MT; \* **Endoscopy** --methods--MT; \*Videotape Recording; Aged; Length of Stay; Middle Age; Postoperative Complications

Record Date Created: 19960313

6/5/15 (Item 4 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

08221531 94363417 PMID: 8081896

**Pericardioscopic implantation of electrodes for myocardial electrocardiostimulation.**

Kolesov E V; Lukashev S N; Gaiduk A I

Department of Surgery I, Dnepropetrovsk Medical Institute, Ukraine.

Endoscopic surgery and allied technologies (GERMANY) Oct-Dec 1993, 1 (5-6) p275-6, ISSN 0942-6027 Journal Code: 9412631

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Subfile: INDEX MEDICUS

Endocardial placement of electrodes for myocardial electrostimulation is a standard procedure. In the past, myocardial electrode placement was not performed routinely mainly because of the trauma of surgical access to the **heart**. We have developed for the first time an **endoscopic** approach. It is based on the use of a rigid **endoscope** with a diameter of 20 mm, which is introduced via a **subxyphoideal** skin incision into the pericardium. A sutureless, screw-in electrode is positioned via the **endoscope**. 129 patients were treated successfully without method-related lethality. An advantage especially for our large country is the possibility of performing this procedure in distant hospitals without the need of X-ray facilities. The equipment can be carried in an attache case. Further developments could include two-chamber ECS using disposable kits ready for on-the-spot use.

Tags: Female; Human; Male

Descriptors: \*Electrodes, Implanted; \*Pacemaker, Artificial; \*Thorascopes; Adult; Aged; Aged, 80 and over; Cause of Death; Hospital Mortality; Middle Age; Postpericardiotomy Syndrome--etiology--ET; Postpericardiotomy Syndrome--mortality--MO

Record Date Created: 19941011

6/5/16 (Item 5 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

07518000 93043564 PMID: 1421545

**Percutaneous endoscopic implantation of Automatic Implantable Cardioverter /Defibrillator (AICD): an animal study of a new nonthoracotomy technique.**

Reznik G; Gershman A; Grundfest W S

University of California, Irvine, UCI Medical Center, Orange.

Journal of laparoendoscopic surgery (UNITED STATES) Oct 1992, 2 (5)  
p255-61, ISSN 1052-3901 Journal Code: 9109598

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Subfile: INDEX MEDICUS

The Automatic Implantable **Cardioverter** /Defibrillator (AICD) prevents death due to malignant ventricular arrhythmias but requires thoracotomy for the implantation of the preferred two-patch lead system. The purpose of this study was to develop and test a new percutaneous **endoscopic** method of the AICD lead implantation without the need for open chest surgery. A high resolution video **endoscopy** system and currently available **endoscopic** instrumentation were used to develop pleural-pericardial dissection technique in 7 pigs and to **endoscopically** implant custom-made AICD patches in 20 pigs. An examining 10 mm rigid **endoscope** inserted in the 6th intercostal space in the anterior axillary line provided direct visual control for **endoscopic** dissection of the parietal pleura from the pericardium, delivery, and implantation of the AICD patches. This was successfully carried out through two trocars (10 and 11 mm) inserted into the pleural-pericardial space via the **subxyphoid** approach in 18 of 20 pigs. Effective patch positioning was confirmed by attaining a defibrillation threshold of 20J or less in 13 pigs. Of those, three required lead polarity reversal, and three others required lead repositioning to lower defibrillation thresholds to 20J or less. In three pigs, defibrillation thresholds of 30J or higher were required. Defibrillation was unsuccessful in two pigs due to patch malfunction. The authors conclude that percutaneous **endoscopy** is a feasible method of AICD lead implantation.

Tags: Animal

Descriptors: Defibrillators, Implantable; \* **Endoscopy** --methods--MT;

\*Punctures--methods--MT; Methods; Swine; Thoracotomy

Record Date Created: 19921223

6/5/17 (Item 6 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)

07315396 92249882 PMID: 1577366

**Pericardioscopy--a new window to the heart in inflammatory heart diseases]**

Perikardioskopie--ein neues Fenster zum Herzen bei entzündlichen Herzerkrankungen.

Maisch B; Drude L

Abteilung für Innere Medizin, Schwerpunkt Kardiologie der Philipps-Universität Marburg.

Herz (GERMANY) Apr 1992, 17 (2) p71-8, ISSN 0340-9937

Journal Code: 7801231

Document type: Journal Article ; English Abstract

Languages: GERMAN

Main Citation Owner: NLM

Record type: Completed

Subfile: INDEX MEDICUS

Pericardioscopy is a new diagnostic tool to visualize macroscopically alterations of both the epicardium and pericardium. For the first time the macropathology of the epicarditis and pericarditis can be observed in vivo by the **cardiologist** in viral, bacterial, uremic and autoimmune **cardiac** processes. It enables us also to get an insight into neoplastic and metastatic processes affecting the **heart** and the pericardium. The prerequisite is the documentation of a larger pericardial (greater than 150 ml by the cubic model) effusion with an echocardiographically documented effusion of type C (Figure 1b), which must have at least 5 mm separation of the epicardial and pericardial layer in diastole at the anterior side of

the heart when echocardiographic imaging is performed from the subxyphoidal or third intercostal space (Figure 1a). The first experience in 30 patients is reported. After puncture of the pericardial effusion a 9F sheath was introduced by use of a guide wire under echocardiographic and/or x-ray control (Figure 3). The fluid was removed by aspiration and 100 to 150 ml of body warm saline were infused in the pericardial sack. A flexible 8F fiber glass instrument (Vantec, Baxter or Storz) and a rigid 110 degrees 8F endoscope (Storz) were used for visualization of peri- and epicardium and for video documentation (Figure 2). After endoscopic inspection of the macropathology fibrinous strands (Figure 4) or increased vascular injection (Figure 5) can be observed in viral, autoimmune or idiopathic pericarditis or perimyocarditis. In the latter three forms of pericardial effusion only inflammatory cells (Figure 6) can be observed when the pericardial fluid is analyzed. (ABSTRACT TRUNCATED AT 250 WORDS)

Tags: Comparative Study; Female; Human; Male; Support, Non-U.S. Gov't

Descriptors: **Endoscopy** ; \*Pericardial Effusion--diagnosis--DI; \*Pericarditis--diagnosis--DI; \*Pericardium; Adult; Aged; Complement --analysis--AN; Cytodiagnosis; Diagnosis, Differential; Echocardiography; **Endoscopes** ; Immunoglobulins--analysis--AN; Middle Age; Pericarditis --immunology--IM; Pericarditis--pathology--PA; Pericardium--pathology--PA  
CAS Registry No.: 0 (Immunoglobulins); 9007-36-7 (Complement)  
Record Date Created: 19920605

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S2	407390	ENDOSCOP?
S3	4840302	HEART OR CARDIO? OR CARDIA?
S4	39	S1 AND S2 AND S3
S5	24	RD (unique items)
S6	17	S5 NOT (PY>1999 OR PD>19990810)

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File 164:Allied & Complementary Medicine 1984-2002/Nov  
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6/3,K/1 (Item 1 from file: 442)  
 DIALOG(R)File 442:AMA Journals  
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00098585

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# Laparoscopy During Pregnancy (ARTICLE)

CURET, MYRIAM J.; ALLEN, DOUGLAS; JOSLOFF, ROBERT K.; PITCHER, DAVID E.;  
 CURET, LUIS B.; MISCALL, BRIAN G.; ZUCKER, KARL A.

Archives of Surgery

May, 1996; Paper: tzs546

LINE COUNT: 00520

... blood flow caused by increased intra-abdominal pressure,/17/ and fetal hypotension from decreased maternal **cardiac** output/22,23,26,27/ remain unanswered. This study was undertaken to determine whether pregnant...

... these patients because they were not considered viable should perioperativepreterm labor lead to delivery. Fetal **heart** tones were obtained preoperatively and postoperatively and were normal in all patients. Sequential compression stockings...a pneumoperitoneum can lead to a decrease in venous return with a concomitant decrease in **cardiac** output./22,23,26,27/ The fetus is exquisitely sensitive to maternal **cardiopulmonary** stability, and the primary cause of fetal demise is maternal hypotension and/or hypoxia./28/ Clearly, a drop in maternal **cardiac** output could lead to fetal distress. In addition, the increased intra-abdominal pressure could directly...

... table to displace the uterus. This will allow for better venous return and maintenance of **cardiac** output. Also, minimizing the degree of reverse Trendelenburg positioning will further reduce possible uterine compression ... at or above the umbilicus, we recommend initial placement of the camera port in the **subxiphoid** space. After visual exploration of the abdomen, the remaining ports can be placed where needed...

... middle-to-late second trimester, the camera port should beplaced in the supraumbilical region. Initial **subxiphoid** placement of the camera port may be necessary if the uterine fundus is above the...

...26:338-346.

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Ivankovich AD, Miletich DJ, Albrecht RF, Heyman HJ, Bonnet RF. **Cardiovascular** effects of intraperitoneal insufflation with carbon dioxide and nitrous oxide in the dog. Anesthesiology. 1975...

...SurgEndoscopy. 1995;9:272-279.

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McKénzie R, Wadhwa RK, Bedger RC. Noninvasive measurement of **cardiac** output during laparoscopy. J Reprod Med. 1980;24:247-250.

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Westerband A, Van de Water JM, Amzallag M, et al. **Cardiovascular** changes during laparoscopic cholecystectomy. Surg Gynecol Obstet. 1992;175:535-538.

28.

Kammerer WS. Nonobstetric...

... Could you give us your guidelines about managing and evaluating these patients? Do you use **endoscopic** cholangiography, for example, and intraoperatively do you use cholangiograms or rely on ultrasonography alone?

Dr...

6/3,K/2 (Item 2 from file: 442)  
DIALOG(R) File 442:AMA Journals  
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00030025  
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**Cardiac Tamponade and Constrictive Pericarditis Complicating Endoscopic Sclerotherapy (ORIGINAL INVESTIGATIONS)**

BROWN, DAVID L.  
Archives of Internal Medicine  
December, 1987; 147: 2169-2170 1987;  
LINE COUNT: 00084 WORD COUNT: 01162

**Cardiac Tamponade and Constrictive Pericarditis Complicating Endoscopic Sclerotherapy**

... case of suspected esophageal perforation with injection of a sclerosing agent into the pericardium during **endoscopic** sclerotherapy of esophageal varices. Immediately after the procedure, the patient developed fever and a pericardial friction rub. Eight months later, he presented with **cardiac** tamponade and constrictive pericarditis. This complication should be considered whenever a patient presents with inadequate **cardiac** output, venous congestion, and a pulsus paradoxus following sclerotherapy.

**Endoscopic** sclerotherapy successfully controls acute esophageal variceal hemorrhage and appears to reduce the incidence of subsequent...

... 10% to 15% of patients have a significant complication. (Ref. 1) Esophageal perforation by the **endoscope** may occur in as many as 6% of patients. (Ref. 2) We report what we...

... case of perforation and injection of sclerosant through the esophagus into the pericardium during flexible **endoscopic** sclerotherapy that resulted in acute pericarditis followed, eight months later, by constrictive pericarditis and **cardiac** tamponade.

**REPORT OF A CASE**

A 41-year-old man with alcoholic cirrhosis was admitted...

... he had been hospitalized with acute hemorrhage from esophageal varices. Twice during that admission, flexible **endoscopic** sclerotherapy was performed with a total of 20 mL of morrhuate sodium injected during each...

... and dullness to percussion was present over the lower half of the right posterior thorax. **Cardiac** examination failed to locate the apical impulse. **Heart** sounds were normal. There were no rubs, gallops, or murmurs. The abdomen was soft; shifting...

... tuberculin skin test was not reactive. Chest radiography demonstrated a large right pleural effusion and **cardiomegaly**. A contrast esophagram was normal. An electrocardiogram showed normal voltage, sinus tachycardia, and flattening of...

... effusion, anteriorly and posteriorly. Right ventricular diastolic compression and right atrial systolic inversion, consistent with **cardiac** tamponade, were present. Balloon flotation catheterization of the right side of the **heart** confirmed decreased **cardiac** output, with elevation and equalization of central venous, right ventricular diastolic, and left ventricular pressures (Table). **Subxiphoid** pericardiocentesis was performed, removing 200 mL of serosanguineous fluid. The hematocrit of the fluid was...

**...COMMENT**

The clinical course of this patient strongly implicates a small, perhaps injection needle-induced, **endoscopic** perforation of the esophagus with intrapericardial injection of morrhuate sodium as a cause of

pericarditis...

... filling that the accumulation of 200 mL of free pericardial fluid was sufficient to produce **cardiac** tamponade. The resulting hemodynamic syndrome, termed effusive-constrictive pericarditis, occurs when pericardial constriction and a...

... this patient, the clinical picture on presentation is dominated by tamponade hemodynamics characterized by inadequate **cardiac** output, venous congestion, and a prominent pulsus paradoxus. Pericardiocentesis unmasks clinical and hemodynamic evidence of constriction, with improved, but still impaired, **cardiac** output, persistent elevation of venous pressures, and a less prominent pulsus paradoxus. Constrictive pericarditis often...

...diastolic filling.

In summary, effusive-constrictive pericarditis is a potentially serious, but treatable, complication of **endoscopic** sclerotherapy. Distended neck veins and a pulsus paradoxus should suggest this diagnosis in any patient...

... ascites, and dyspnea before such symptoms are attributed to progressive liver disease or unrelated congestive **heart** failure.

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**Endoscopic** sclerotherapy for esophageal varices. Ann Intern Med  
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- ...3. Davis S, Sharma SM, Blumberg ED, et al: Intrapericardial tetracycline for the management of **cardiac** tamponade secondary to malignant pericardial effusion. N Engl J Med 1978;299:1113-1114.
- 4...

6/3,K/3 (Item 3 from file: 442)

DIALOG(R) File 442:AMA Journals

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00011446

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#### Electrocardiographic Changes Suggestive of Cardiac Ischemia in a Patient With Esophageal Food Impaction; 'A Case That's Hard to Swallow' (CASE REPORT)

YACKEE, JOHN; LIPSON, ACE; WASSERMAN, ALAN G.

JAMA, The Journal of the American Medical Association

April 18, 1986; 255: 2065-2066/1986;

LINE COUNT: 00086 WORD COUNT: 01194

#### Electrocardiographic Changes Suggestive of Cardiac Ischemia in a Patient With Esophageal Food Impaction; 'A Case That's Hard to Swallow'

MANY patients presenting with chest pain initially believed to be **cardiac** in etiology may, in fact, have esophageal disease as an alternative or additional cause of...

... the ECG is generally thought to be a reliable means of distinguishing between esophageal and **cardiac** pain. (Ref. 10,11) In this report, we describe a patient who developed ECG changes suggestive of **cardiac** ischemia secondary to esophageal food impaction.

#### Report of a Case

A 57-year-old woman...

... she had the sensation of a piece of meat sticking in her throat, associated with **subxyphoid** and epigastric discomfort with mild nausea and hiccoughs. She was unable to swallow liquids, regurgitating...

... obese woman regurgitating her saliva into a cup. Blood pressure was 120/70 mm Hg; **heart** rate, 84 beats per minute and regular; respirations, 18/min and unlabored. The **cardiac** and abdominal findings were unremarkable. Laboratory values were remarkable for a potassium level of 3 ...

... were noted. There was no evidence of an esophageal stricture. An ECG obtained soon after **endoscopic** disimpaction showed marked improvement of the ST-T-wave changes (Fig 3).

Comment

ST-T...

... to esophageal food impaction. This patient presented with chest discomfort and ECG changes consistent with **cardiac** ischemia. Although the history of previous esophageal symptoms, the subjective sensation of food lodging in the throat, and the upper GI tract x-ray and **endoscopic** findings make the esophageal etiology of her chest discomfort readily apparent, this case has important implications regarding the reliability of ECG changes in differentiating **cardiac** and esophageal causes of chest pain. This differentiation can otherwise be difficult since historical features...

... ECG findings other than her esophageal disease seem unlikely. Since our patient did not undergo **cardiac** catheterization with ergonovine provocation, a **cardiac** etiology for the ECG changes, such as ischemia precipitated by the esophageal impaction, cannot be completely excluded. However, the lack of previous **cardiac** history and the prompt resolution of the changes with esophageal disimpaction argue strongly against such a role for **cardiac** ischemia. The patient also has recently had normal results on a treadmill exercise test.

Similarly, **cardiac** ischemia precipitated by coronary spasm as one component of a generalized disorder of smooth muscle...

... conceive how a direct mechanical effect due to the proximity of the esophagus to the **heart** might induce ventricular repolarization abnormalities.

... of ST-T-wave changes due to clinical esophageal impaction and speculate an autonomic esophageal- **cardiac** interplay as the mechanism. This case provides additional evidence that the ECG is not always a reliable means of differentiating chest pain of **cardiac** and esophageal etiologies.

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- ...by ergometrine provocation. Gut 1982;23:89-97.
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6/3,K/4 (Item 1 from file: 444)

DIALOG(R) File 444:New England Journal of Med.

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00106617

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**Weekly Clinicopathological Exercises: Case 44-1989: A 74-Year-Old Woman with Subxiphoid Pain and Narrowing of the Esophagus (Case Records of the Massachusetts General Hospital)**

Orringer, Mark B.; Mark, Eugene J.  
The New England Journal of Medicine  
Nov 2, 1989; 321 (18), pp 1249-1259  
LINE COUNT: 00758 WORD COUNT: 10460

**Weekly Clinicopathological Exercises: Case 44-1989: A 74-Year-Old Woman with Subxiphoid Pain and Narrowing of the Esophagus (Case Records of the Massachusetts General Hospital)**

TEXT

...of Case

A 74-year-old woman was admitted to the hospital because of severe **subxiphoid** pain...

...She was well until four hours earlier, when severe pain developed in the **subxiphoid** area after she finished breakfast, accompanied by a burning sensation referred to the lower third...

...mastectomy scar was present, without evidence of recurrent tumor; the right breast was normal. The **heart** was normal; tenderness was elicited over the lower portion of the sternum and xiphoid process...

...An x-ray film of the chest revealed evidence of a previous left mastectomy; the **heart** was at the upper limit of normal in size, and the aorta was unfolded; the...portable technique, showed air in the mediastinum and subsegmental atelectasis of the right lung; the **heart** was difficult to evaluate because of the patient's rotated position. A percutaneous angiographic examination...

...hernia and heartburn, presumably due to gastroesophageal reflux. She was admitted to the hospital with **subxyphoid** pain and odynophagia. She subsequently had hematemesis and evidence of a substantial upper gastrointestinal hemorrhage...essentially normal except for minimal dilatation and retention of barium. In the region of the **cardioesophageal** junction there is an elongated, smooth, tapered narrowing about 5 to 8 cm above the...

...Dr. Orringer: This case poses two problems. The first is the differential diagnosis of acute **subxyphoid** pain associated with odynophagia and bleeding from the upper alimentary tract, and the second is the treatment of a patient with an esophageal perforation after **endoscopic** examination. From its onset this patient's pain appeared to be of esophageal origin. The differential diagnosis of severe retrosternal pain in an elderly patient is lengthy and includes **cardiac** ischemia, pericardial disease, thoracic aortic dissection, and a host of possible gastrointestinal disorders such as...of admission. The pain of gastroesophageal reflux is typically described as a burning epigastric and **subxyphoid** pain, which may radiate to the neck or the interscapular region of the back. The pain frequently occurs after meals and is related to swallowing food. **Endoscopic** evidence of reflux esophagitis need not be present in patients with reflux whose esophagus is...

...relieved by standing and walking, which often aggravate true angina pectoris. Nitroglycerin may relieve both **cardiac** and esophageal pain and is therefore not particularly helpful in differentiating them. Emotional stress can...that must be considered in the setting of an elderly patient who presents with constant **subxyphoid** pain and dysphagia without any other obvious cause is an incarcerated strangulated paraesophageal hiatal hernia...

...that of the patient under discussion. The pure Type II paraesophageal hernia, in which the **cardia** is fixed at its usual location at the level of the diaphragm and the gastric...

...The diagnostic possibilities in this patient have now become limited. Few remaining conditions produce constant **subxyphoid** pain, odynophagia,

and hematemesis. Additional clues are obtained from the findings at the **endoscopic** examination performed on the third hospital day. A few words about esophagoscopy examination in general...

...this point. The availability of the flexible fiberoptic esophagogastroscope has revolutionized this field and permitted **endoscopic** assessment of the esophagus with greater facility than was ever possible in the past. Unfortunately...

...esophageal perforation, however, have not changed over the years, and common ground rules for safe **endoscopic** examination are still important. Among the most important to me is the availability of the...

...esophagoscope. Just as a road map guides the traveler, the barium-swallow study alerts the **endoscopist** to the presence and location of preexisting esophageal disease. It is difficult to justify perforation ...

...or stricture because of a lack of awareness of the presence of either before the **endoscopic** procedure. A knowledge of esophageal anatomy enables the **endoscopist** to predict from the barium-swallow study the level at which disease will be found amenable to dilation therapy. The **endoscopist** described entering the stomach 30 cm from the upper incisors. Unless this patient was of...

...barium-swallow study showed no definite hiatal hernia it is much more likely that the **endoscopist** identified the squamocolumnar epithelial junction in this patient at 30 cm, thus documenting the presence...

...esophagus are often difficult, since in the normal distal esophagus columnar epithelium of the gastric **cardia** may be present for 1 to 2 cm above the esophagogastric junction. There is controversy...

...men. Barrett's esophagus is reported in 11 to 20 percent of all patients with **endoscopic** evidence of reflux esophagitis (Ref. 19,20) and in 44 percent of patients with chronic...or an antireflux operation. In this patient, who was admitted to the hospital with severe **subxyphoid** pain on swallowing, a prompt esophageal study with contrast material and esophagoscopy examination with a...

...After the esophagoscopy examination and biopsy the patient's **subxyphoid** pain increased, pleuritic pain developed, and an x-ray film of the chest demonstrated pneumomediastinum...

...immediate esophageal study with contrast material (Ref. 30). An aggressive defensive attitude toward diagnosing an **endoscopic** perforation must be adopted, since the morbidity and mortality rates associated with perforation are directly...

...a Barrett's esophagus with ulceration and hemorrhage. I think that the patient had an **endoscopic** esophageal perforation as well... **Endoscopic** esophageal perforation...Examination of biopsy specimens taken at the emergency **endoscopic** examination a few hours before the esophagectomy showed that the esophageal epithelium was squamous at...

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- ...and morphologic comparison between adenocarcinomas arising in Barrett's esophageal mucosa and in the gastric **cardia**. Gastroenterology 1984; 86:461-7.
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6/3,K/5 (Item 1 from file: 149)  
DIALOG(R)File 149:TGG Health&Wellness DB(SM)  
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01811859 SUPPLIER NUMBER: 53408470 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**The Role of Laparoscopic Nissen Fundoplication In Gastroesophageal Reflux Disease.**  
Vaca, Kathy J.; Daake, Carol J.; Marquez, Stephanie A.; Lambrechts, Donna S.  
MedSurg Nursing, 7, 6, 364(1)  
Dec,  
1998  
PUBLICATION FORMAT: Magazine/Journal; Refereed ISSN: 1092-0811  
LANGUAGE: English RECORD TYPE: Fulltext; Abstract TARGET AUDIENCE:  
Professional  
WORD COUNT: 4638 LINE COUNT: 00464

... esophagogastric junction.  
The second approach is a laparotomy in which an incision is made from  
**below** the **xiphoid** process to the level of the umbilicus. Specific  
indications for using laparotomy include the presence...but its acceptance  
will depend on clinical outcome. Like thorascopic lung surgery and  
minimally invasive **cardiac** surgery, the use of less invasive techniques  
will provide increased options for the current patient...  
...L., & Concannon, J.L. (1986). Length of the distal esophageal sphincter  
and competency of the **cardia**. American Journal of Surgery, 151, 25-34.  
Dallemaigne, B., Weerts, J.M., Jehaes, C., Markiewicz, S., & Lombard,  
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Laparoscopy and **Endoscopy**, 1, 138-143.  
DeMeester, T.R., & Stein, H.J. (1989). Gastroesophageal reflux  
disease. In F...of esophageal reflux and hiatal hernia. Long-term results  
with 1030 patients. Journal of Thoracic & **Cardiovascular** Surgery, 53,  
33-54.  
Spechler, S.J. (1992). Epidemiology and natural history of  
gastroesophageal reflux...

...the lungs, causing irritation and asthma-like symptoms.  
Health Promotion Materials for Minorities  
The National **Heart**, Lung, and Blood Institute and the Office of  
Research on Minority Health of the National Institutes of Health have  
developed educational materials that support a wide range of **heart** health  
promotion activities for the African American and Latino communities. The  
materials include booklets on improving **cardiovascular** health and cooking  
recipes. For more information, contact: NHLBI Information Center,  
Department M-ANA, PO...  
...Kathy J. Vaca, BSN, RN, CCRN, was a Nurse Clinician, Department of  
Surgery, Division of **Cardiothoracic** Surgery, Saint Louis University  
Health Sciences Center, St. Louis, MO, at the time this article...

...Carol J. Daake, MSN, RN, ANP, was Clinical Nurse Specialist, Department  
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DIALOG(R)File 149:TGG Health&Wellness DB(SM)  
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01789467 SUPPLIER NUMBER: 20485053 (USE FORMAT 7 OR 9 FOR FULL TEXT)

On the horizon: minimally invasive cardiac surgery. (Cardiac Surgery,

Part 1: Acute Care)

Vitello-Cicciu, Joan; Fitzgerald, Carmel; Whalen, Deborah

Journal of Cardiovascular Nursing, v12, n3, p1(16)

April,

1998

PUBLICATION FORMAT: Magazine/Journal ISSN: 0889-4655 LANGUAGE: English

RECORD TYPE: Fulltext; Abstract TARGET AUDIENCE: Professional

WORD COUNT: 6599 LINE COUNT: 00583

On the horizon: minimally invasive cardiac surgery. (Cardiac Surgery,  
Part 1: Acute Care)

ABSTRACT: Minimally invasive cardiac surgery is on the horizon. Already 1500+ patients in the world have undergone minimally invasive...

...of congenital defects; and valvular repair and replacement, to the mitral and aortic areas especially. Cardiac surgery is changing as advances are made in endoscopic and other instrumentation procedures such as video instrumentation, port access, and computer-assisted technology. MIDCAB...

...surgery through small ports of incision made in the chest wall between ribs without using cardiopulmonary bypass.

TEXT:

The landscape of cardiac surgery is changing. Advances in endoscopic and other instrumentation procedures such as port access, video instrumentation, and computer-assisted technology are opening new vistas for cardiac surgery. On the immediate horizon is minimally invasive cardiac surgery, also known as keyhole surgery. Imagine a patient not needing a median sternotomy incision or cardiopulmonary bypass. This new type of cardiac surgery is currently being explored at some cardiac surgical centers internationally. This article explores the current state-of-the-art related to minimally...

...care, likely future technologies, and the research literature on outcomes are also discussed. Key words: cardiac surgical patient, coronary artery bypass graft, Heartport surgery, hybrid procedure, keyhole surgery, left anterior small thoracotomy (LAST), minimally invasive cardiac surgery, minimally invasive direct coronary artery bypass surgery (MIDCAB), port access, revascularization centers, valvular surgery

Over the past several years there has been a proliferation of minimally invasive cardiac procedures. More than 1, 500 patients worldwide have undergone minimally invasive direct coronary artery bypass ...

...the discussion in this article will be devoted to MIDCAB surgery, but other modalities of cardiac surgery will also be explored.

MINIMALLY INVASIVE DIRECT CORONARY ARTERY BYPASS SURGERY

MIDCAB surgery is...

...or small incisions made in the chest wall between the ribs without the assistance of cardiopulmonary bypass. Numerous acronyms for this procedure are found in the literature. These include minimally invasive...

...keyhole, and left anterior small thoracotomy.

The appeal of doing MIDCAB procedures is to avoid cardiopulmonary bypass and a median sternotomy incision, to extubate the patient early, to reduce the need...

...Miller, (7) Murray et al, (8) Sabiston, (9) and Kolesov (10) before the inception of cardiopulmonary bypass. However, with the advent of cardiopulmonary bypass (CPB) technology and myocardial preservation, cardiac surgeons were able to operate within a relatively quiet and bloodless surgical environment with greater...

...The coronary-bypass operation using a median sternotomy incision with concomitant CPB has dominated the **cardiac** surgical arena for the past three decades. Patients undergoing this procedure have predictable long-term...

...with thorascopic assistance. The anastomosis of the ITA to the LAD is performed with the **heart** beating, with or without CPB (some surgeons are employing percutaneous bypass) and the use of...

...profound effect on minimizing perioperative care needs and shortening the recovery period following minimally invasive **cardiac** surgery. CPB is well known to be associated with significant systemic inflammatory responses and hemostatic derangements affecting neurologic, ventilatory, **cardiac**, renal, and hematologic parameters in the perioperative period. (14) Because both ventilatory and hemodynamic alterations...

...24 hours. MIDCAB patients then can be transferred from the intensive care unit (ICU) or **cardiac** post anesthesia recovery area to a telemetry postoperative unit within several hours of surgery, avoiding...

...weeks versus the 6- to 8-week usual recovery period of patients undergoing traditional open **heart** surgery. In addition, the mediastinum is not entered during the MIDCAB, so the risk of...

...indications for this procedure should be patient related and not determined by surgeon preference. Many **cardiothoracic** (CT) surgeons are proceeding with caution prior to totally abandoning CPB. According to Lytle, (17...via a small incision with limited visualization and the need to operate on a beating **heart** .

The majority of minimally invasive **cardiac** surgeries involve CABG of the LAD artery with an in situ ITA graft to bypass...

...to angioplasty in terms of the extent of revascularization achieved. So, why have minimally invasive **cardiac** surgery if a patient can simply undergo a percutaneous coronary angioplasty procedure? There are certainly ...

...and now require reoperation. (6,11,20,21)

#### PREPARATION OF THE PATIENT

After the patient, **cardiologist**, and CT surgeon have decided that the MIDCAB is the procedure of choice, the CT...

...including discontinuing aspirin or products containing aspirin for 7 days prior to surgery.

#### INTRAOPERATIVE PHASE

**Cardiopulmonary** bypass support standby

The operating room has MIDCAB-specific tools and instruments in addition to...lung ventilation (right lung) may be employed in MIDCAB surgery to improve access to the **heart** and decrease **cardiac** movement caused by inflation/deflation of the left lung. (15,23)

#### Incisions

The obvious feature of minimally invasive **cardiac** surgery is a small incision that decreases patient trauma and accelerates recovery. The majority of...

...being used, and/or arteries being bypassed. Additional mini-incisions include mini-sternotomy, and parasternal, **subxiphoid**, and posterolateral approaches. (6,11,12)

If an ITA is the conduit of choice, the...

...usually performed via direct vision after retractors are positioned to lift the ribcage off the **heart**. Video-directed ITA harvesting can also be performed via thorascopic approach. However, the use of...

...and anastomosis

MIDCAB grafting is technically demanding due to placement of sutures on a "beating" **heart**. The **heart** may be either slowed or temporarily stopped by pharmacologic agents such as (Beta)- and calcium...

...of the most significant technologic advances affecting the quality of the anastomosis in minimally invasive **cardiac** surgery. (11) Two

artery bypass grafting without **cardiopulmonary** bypass. Ann Thorac Surg. 1993;55:486-489.

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...patients undergoing minimally invasive coronary artery bypass surgery: Mini-sternotomy and mini-thoracotomy approaches. J **Cardiothorac Vasc Anes**. 1996;10(4):531-535.

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...of internal thoracic artery undergoing coronary artery bypass grafting: Continuous-wave doppler assessment. J Thorac **Cardiovasc** Surg. 1996;112:52-58.

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(29.) MacGovern JA, Benckart DH, Landrenneau RJ, Sakert T...

...driving for 1 week

- \* Incentive spirometry when awake
- \* Pain management
- \* Change in medication from preoperative
- \* **Cardiac** prudent diet
- \* Support person available for discharge
- \* Outpatient **cardiac** rehabilitation program
- \* Hospital contact phone number
- \* Follow-up care with **cardiothoracic** surgeon and **cardiologist**

Joan Vitello-Cicciu, MSN, RN, CCRN, CS, FAAN Acting Nurse  
Manager-Emergency Department Critical Care Clinical Specialist  
Carmel Fitzgerald, MSN, RN, CCRN, ANP **Cardiovascular** Case Manager  
Deborah Whalen, MSN, MBA, RN, CCRN, ANP **Cardiovascular** Case Manager  
Boston Medical Center Boston, Massachusetts

DESCRIPTORS: **Heart** --

6/3,K/7 (Item 3 from file: 149)

DIALOG(R)File 149:TGG Health&Wellness DB(SM)

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01603677 SUPPLIER NUMBER: 17480061 (USE FORMAT 7 OR 9 FOR FULL TEXT)

**The diagnostic and therapeutic utility of thoracoscopy: a review.**

Harris, Randall J.; Kavuru, Mani S.; Rice, Thomas W.; Kirby, Thomas J.  
Chest, v108, n3, p828(14)

Sept,  
1995

PUBLICATION FORMAT: Magazine/Journal ISSN: 0012-3692 LANGUAGE: English

RECORD TYPE: Fulltext TARGET AUDIENCE: Professional

WORD COUNT: 10002 LINE COUNT: 00866

... remain unknown despite thoracentesis, closed pleural biopsy, transthoracic needle aspiration, or bronchoscopy. Recent advances in **endoscopic** technique, video equipment, and the development of better instrumentation have contributed to the resurgence of...

...of the pleural space. Simple rigid thoracoscopy can be performed under local anesthesia in an **endoscopy** suite or under general anesthesia in an operating room. When performed under general anesthesia, a...

...operative procedures. These procedures often require improved visualization and precise instruments. The development of an **endoscopic** stapler that simultaneously cuts, staples, and limits air leaks was a major advancement for the...of continued air leak, and the recurrence rate. Small, asymptomatic pneumothoraces in patients with adequate **cardiopulmonary** reserve may be managed by simple aspiration or observation. If the pneumothorax is large or...

...bleb resection and pleurodesis is 3.6% (mean follow-up, 9.1 years).[65]

Endoscopic **photocoagulation** by argon or neodymium:yttrium-aluminum-garnet (ND:YAG) lasers can be used as curative...thoracotomies and limit hospitalizations for malignant pericardial disease.[74,75] Its superiority to the subxiphoid **pericardial** window for both benign and malignant pericardial disease, however, has not been shown.[76] We believe that the subxiphoid **approach** for pericardial drainage is simpler, minimally invasive, and effective.

#### COMPLICATIONS

##### Morbidity

Known complications of thoracoscopy...It is useful for therapeutic procedures such as pleurodesis and uncomplicated empyema drainage. Current endoscopic **and** VATS techniques have the potential to limit morbidity and reduce hospital stays for major operations...

...Med 1991; 114:271-76 [3] Adams DCR, Wood SJ, Tulloh BR, et al. Endoscopic **transthoracic** sympathectomy: experience in the south west of England. Eur J Vasc Surg 1992; 6:558...

...esophagomyotomy. Ann Surg 1992; 216:291-96 [5] Donnelly RJ, Page RD, Cowen ME. Endoscopy- **assisted** microthoracotomy: initial experience. Thorax 1992; 47:490-93 [6] Kirby TJ, Mack MJ, Landreneau RI...

...C, Cargnino P, Viallat JR. Thoracoscopy in the early diagnosis of malignant pleural effusion. Endoscopy 1980 ; 12: 155-60 [14] Boutin C, Viallat JR, Cargnino P, et al. Thoracoscopy in malignant...Comparison of open versus thoracoscopic lung biopsy for diffuse infiltrative pulmonary disease. J Thorac Cardiovasc Surg 1993; 106:194-99 [39] Daniel TM, Kem JA, Tribble CG. Thoracoscopic surgery for diseases...

...461-64 [53] Wakabayashi A. Expanded applications of diagnostic and therapeutic thoracoscopy. J Thorac Cardiovasc Surg 1991; 102: 721-23 [54] Benfield JR. Commentary. Ann Thorac Surg 1991; 51:464 [55]...

...chest tube using tetracycline and bleomycin for control of malignant pleural effusion. J Thorac Cardiovasc Surg 1993; 105:743-48 [59] Aelony Y, King R, Boutin C. Thoracoscopic talc poudrage pleurodesis for...Tone M, Grassi M, Nerlie FP, et al. Nd:YAG laser pleurodesis via thoracoscopy: endoscopic **therapy** in spontaneous pneumothorax. Chest 1994; 106:338-41 [67] Dowling RD, Keenan RJ, Ferson PF...

...Surg 1992; 54:403-09 [76] Moores DW, Allen KB, Giuman DJ, et al. Subxiphoid **pericardial** window for pericardial tamponade: safe, cost effective, and durable [abstract 27]. In program and abstracts...

...GR, Rogers RM. Adult respiratory distress syndrome following intrapleural installation of talc. J Thorac Cardiovasc Surg 1983; 85:523-26 [81] Boutin C, Viallat JR, Camino P, et al. La thoracoscopie...

...Departments of Pulmonary and Critical Care Medicine (Drs. Harris and Katuru) and Thoracic and Cardiovascular **Surgery** (Drs. Rice and Kirby), The Cleveland Clinic Foundation, Cleveland, Ohio. Reprint requests: Dr. Kavuru, Department...

6/3,K/8 (Item 4 from file: 149)  
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01488939 SUPPLIER NUMBER: 14863428 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Mixed cryoglobulinemia in chronic hepatitis C infection: a

clinicopathologic analysis of 10 cases and review of recent literature.

Levey, John M.; Bjornsson, Bjorn; Banner, Barbara; Kuhns, Mary; Malhotra, Rajwant; Whitman, Nancy; Romain, Paul L.; Cropley, Thomas G.; Bonkovsky, Herbert L.

Medicine, v73, n1, p 53(15)

Jan,

1994

PUBLICATION FORMAT: Magazine/Journal ISSN: 0025-7974 LANGUAGE: English

RECORD TYPE: Fulltext TARGET AUDIENCE: Professional

WORD COUNT: 7594 LINE COUNT: 00797

... chest wall, a liver span of 7 cm with a firm edge palpable in the **subxiphoid** region, and a palpable nontender spleen.

Sonographic imaging of the right upper quadrant was normal...

...had nagging epigastric and right upper quadrant abdominal pain for many months. Upper gastrointestinal tract **endoscopy** showed mild nonspecific changes. When he was last seen in June 1993, the pain had...with MC and HCV infection had renal disease.

None of our patients had otolaryngologic or **cardiac** manifestations of MC, although these manifestations have been described by others. One of our patients...

6/3,K/9 (Item 5 from file: 149)

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01432661 SUPPLIER NUMBER: 14691217 (USE FORMAT 7 OR 9 FOR FULL TEXT)

**Video-assisted thoracic surgical techniques in the diagnosis and management of pericardial effusion in patients with advanced lung cancer.**

Shapira, Oz M.; Aldea, Gabriel S.; Fonger, James D.; Shemin, Richard J.

Chest, v104, n4, p1262(2)

Oct,

1993

PUBLICATION FORMAT: Magazine/Journal ISSN: 0012-3692 LANGUAGE: English

RECORD TYPE: Fulltext TARGET AUDIENCE: Professional

WORD COUNT: 885 LINE COUNT: 00098

... per minute, blood pressure of 100/60 mm Hg, moderate jugular venous distension, and distant **heart** sounds. There was no pulsus paradoxus and the lungs were clear. A chest x-ray...

...right central lung mass with hilar and mediastinal lymphadenopathy and small bilateral pleural effusions. The **cardiac** silhouette was not enlarged. Two-dimensional echocardiography and computed tomography of the chest (Fig 1...

...4]

The surgical options include partial or total pericardiectomy via a left anterior thoractomy, or **subxiphoid** pericardiotomy. Thoractomy is more extensive but allows concomitant assesment of the pleural space. However, it has been associated with significant morbidity, particularly respiratory complications.[5,6] Hence, the **subxiphoid** percardial window has emerged as the drainage procedure most commonly employed.[1,3,5,6...

...percent.[1,3,5,6] Direct pericardoscopy has been used as an adjunct to the **subxiphoid** approach and is reported to increase significantly diagnostic accuracy.[7,8]

Recent technical advances and increasing experience with **endoscopic** surgery[9] afford the opportunity to perform the entire procedure using the videothoracoscope. The approach...

...procedure. The major disadvantage of videothoracoscopy is that it requires a general anesthetic, while a **subxiphoid** pericardial window usually can be performed under local anesthesia.

In summary, videothoracoscopic pericardial drainage appears...



...Vacek JL. What constitutes definitive therapy of malignant pericardial effusion? "medial" versus surgical treatment. Am Heart J 1989; 118:428-32

[2] Posner MR, Cohen GI, Skarin AT, pericardial disease in...

...KS, Kesler KA, Fiore AC, Turrentine M, Hammell LM, Brown JW, et al. Pericardial drainage: **subxyphoid** vs. transthoracic approach. Eur J Cardiothorac Surg 1991; 5:99-104

[7] Little AG, Ferguson MK. Pericardioscopy as adjunct to pericardial ...S, Levitsky S. Flexible fiberoptic pericardioscopy for the diagnosis of pericardial disease. J Am Coll Cardiol 1986; 7:432-34

[9] Coltharp WH, Arnold JH, Alford CW, Burrus GR, Glassford DM...

...DESCRIPTORS: **Endoscopic** surgery

6/3,K/10 (Item 6 from file: 149)

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01418095 SUPPLIER NUMBER: 13722808 (USE FORMAT 7 OR 9 FOR FULL TEXT)

**Video thoracoscopic management of benign and malignant pericardial effusions. (Multimodality Therapy of Chest Malignancies: Proceedings of a Harvard Medical School Symposium)**

Mack, Michael J.; Landreneau, Rodney J.; Hazelrigg, Steven R.; Acuff, Tea E.

Chest, v103, n4, p390S(4)

April,

1993

PUBLICATION FORMAT: Magazine/Journal ISSN: 0012-3692 LANGUAGE: English

RECORD TYPE: Fulltext TARGET AUDIENCE: Professional

WORD COUNT: 1750 LINE COUNT: 00237

TEXT:

...gravely ill patients. This approach should be considered as an alternative to lateral thoracotomy or **subxyphoid** pericardial window for the surgical management of patients with symptomatic benign and malignant pericardial effusions.

... of medically recalcitrant pericardial effusions may often be required. Commonly used operative approaches include the **subxyphoid** pericardial window and, alternatively, pericardiectomy through an anterolateral thoracotomy or median sternotomy.[3-9] All these approaches have specific shortcomings. Although the **subxyphoid** pericardial window is championed by some surgeons because of the relatively minor operative insult related...

...open thoracotomy approaches, but that has the additional merit of operative morbidity comparable with the **subxyphoid** pericardial window technique.

PATIENTS AND METHODS

We have used the VATS approach to manage 22...

...symptomatic pericardial effusions. These same 14 had also undergone therapeutic pericardiocentesis to relieve symptoms of **cardiac** tamponade prior to referral; all had experienced recurrence of the effusions, however. The etiologies of...

...the 7th intercostal space to create intrathoracic access for the thoracoscope and camera (Karl Storz **Endoscopy** -America, Inc, Olympus OTV-S2, Olympus Corporation, Lake Success, NY). Exploratory video thoracoscopy is performed...

...VATS pericardiectomy usually requires 3 intercostal access sites to accommodate for the video camera and **endoscopic** instruments. Additional incisional sites are most commonly positioned in the 6th intercostal space along the...

...2). One port is used to introduce grasping instruments to hold or retract the pericardium. **Endoscopic** scissors are directed through the

other port to incise the pericardium. Occasionally, another access site...

...facilitates exposure and visualization of the pericardium, although it is not required or used routinely. **Endoscopic** electrocautery and **endoscopic** scissors (Endoshears, US Surgical Corp, Norwalk, Conn) are used to divide and excise the pericardium...

...the 5th intercostal space along the anterior axillary line (Fig 3 A and B). Sterile **cardiac** defibrillator paddles and a defibrillation unit are always made available in the operating room to protect against an inadvertent sustained **cardiac** arrhythmia. The phrenic nerve is identified and preserved intact (Fig 3C). During the course of...the cancer patient with symptomatic pericardial effusion is being treated (Table 4).

Improvements in video **endoscopic** equipment and **endoscopic** surgical instrumentation have expanded the role of thoracoscopy from a limited diagnostic modality to an...

...3--Pericardial Effusion: Diagnostic Evaluation \* History/physical examination

Dyspnea, hypoperfusion/hypotension, distended neck veins,  
distant **heart** sounds, paradoxical pulse \* Standard chest  
roentgenogram

Enlarged **cardiac** silhouette \* Electrocardiogram  
Electrical alternans \* Echocardiography (M-mode and 2-D) "Gold"  
standard for

diagnosis \* Computed tomography of chest  
Possibly identify pericardial mass lesion \* Right **heart**  
catheterization

Elevated right-sided pressures/possible pressure plateau of  
Pericardial constriction

Table 4--Malignant Pericardial...

...External-beam radiotherapy

If radiosensitive tumor \* Directed systemic chemotherapy  
If chemosensitive tumor \* Surgical drainage/pericardiectomy  
**Subxiphoid** window, transthoracic window/pericardiectomy by  
lateral thoracotomy, median sternotomy, or thoracoscopy  
Until this reported experience...

...preferred a limited left anterolateral thoracotomy to perform  
pericardiectomy for effusive pericarditis. We had reserved **subxiphoid**  
pericardial drainage for patients with **cardiac** tamponade and significant  
general functional impairment, in whom thoracotomy posed too great a risk.  
Although...

...is still best approached through a left lateral thoracotomy or median  
sternotomy with preparation for **cardiopulmonary** bypass standby.[28]

In conclusion, VATS pericardiectomy may become a preferred surgical  
technique for controlling...

...cases. J Clin Oncol 1984; 2:631-36

[2] Fraser RS, Vilorio JB, Wang NS. **Cardiac** tamponade as a  
presentation of extracardiac malignancy. Cancer 1980; 45:1697-1704

[3] Hankins JR...

...1985; 8:319-23

[6] Naunheim KS, Kesler KA, Fiore AC, et al. Pericardial drainage:  
**subxiphoid** vs transthoracic approach. Eur J **Cardiol** Thorac Surg 1991;  
5:99-104

[7] Miller JI, Mansour KA, Katcher CR. Pericardiectomy: current...  
...JM, Pluth JR, Schaff HV, et al. Surgical management of effusive  
pericardial disease. J Thorac **Cardiovasc** Surg 1985; 90:506-16

[9] Graeber GM. Complications of therapy of malignant tumors  
involving...Thoracoscopic stapled resection of apical bullous disease for  
the treatment of spontaneous pneumothorax. J Thorac **Cardiovasc** Surg 1992  
(in press)

[25] Landreneau RJ, Mack MJ, Hazelrigg SR, et al. Video-assisted...

...Piehler JM, et al. Early and late results of pericardiectomy for  
constrictive pericarditis. J Thorac **Cardiovasc** Surg 1985; 89:340-50

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01313357 SUPPLIER NUMBER: 11198400 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Efficient diagnosis of common complaints: a comparative study in the United States and England.**

Seller, Robert H.; Lobley, Martyn  
Journal of Family Practice, v33, n1, p41(6)  
July,  
1991

PUBLICATION FORMAT: Magazine/Journal ISSN: 0094-3509 LANGUAGE: English  
RECORD TYPE: Fulltext; Abstract TARGET AUDIENCE: Professional  
WORD COUNT: 3026 LINE COUNT: 00289

...ABSTRACT: England. Diagnoses included angina, reflux esophagitis, and asthma. The number of visits required to diagnose **heart** failure was greater for patients in England. The number of diagnostic tests ordered was similar...

... who presented with a complaint of shortness of breath and were subsequently diagnosed as having **heart** failure or asthma.

Results. The results of this study, which compared teaching family medicine practices...

...esophagitis, or presented with a complaint of dyspnea and were subsequently diagnosed correctly as having **heart** failure or asthma. In each country, general practice leading sites were used to obtain the...

...complaint of shortness of breath. Charts were identified using computer searches for the diagnoses of **heart** failure, congestive **heart** failure, asthma, and bronchial asthma. In England, medication records were also used to identify potential...

...digitalis glycosides unloading agents, aminophylline derivatives, isoproterenol, steroid inhalers, or other drugs used to treat **heart** failure or asthma. A patient's chart was included only if he or she had...

...paroxysmal nocturnal dyspnea, cough, nocturnal cough, or wheezing were excluded. Patients with prior diagnoses of **heart** failure, congestive **heart** failure, ...were those who stated that they had been treated previously with drugs commonly used for **heart** failure or asthma.

The diagnostic interval was defined as the number of weeks from the

...

...of breath or difficulty in breathing until the date on which the correct diagnosis of **heart** failure or asthma was recorded in the chart.

The number of visits required to make...

...angina pectoris or reflux esophagitis; and dyspnea or shortness of breath that was diagnosed as **heart** failure or asthma.

These diagnoses were chosen because they are frequent and can be made

...

...in breathing, is commonly encountered in ambulatory practice. [10-12] It is often due to **heart** failure or asthma.

Documentation of well-accepted diagnostic criteria

[TABULAR DATA OMITTED]

was required for...

...relieve the pain. [13]

For reflux esophagitis, the diagnostic criteria were chest pain (substernal or **subxiphoid**); pain that radiated to the jaw, the back, or into the epigastric area; pain that...

...most often due to gastroesophageal reflux. [8,9] Useful diagnostic studies included contrast radiography, an **endoscopy**, radionuclide scintigraphy, esophageal motility studies including esophageal manometry,

Set	Items	Description
S1	183	SUB() (XIPHOID? OR XYPHOID?) OR SUBXIPHOID? OR SUBXYPHOID? - OR (INFERIOR OR BELOW) (2N) (XIPHOID? OR XYPHOID?)
S2	14144	ENDOSCOP?
S3	203642	HEART OR CARDIO? OR CARDIA?
S4	23	S1 AND S2 AND S3
S5	23	RD (unique items)
S6	11	S5 NOT (PY>1999 OR PD>19990810)

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